February 5, 2024

#### UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE

COMMITTEE ON EDUCATIONAL POLICY (Final; Information)

EP.24.051 Report of Administrative Approvals through January 29, 2024

Senate committees are authorized to act for and in the name of the Senate on minor matters. Below is a listing of the administrative approvals the Senate Committee on Educational Policy approved at its meeting on January 29. For each program listing, there is no change to the total hours required. Additional information for each approval is attached.

#### A. Undergraduate Programs

- 1) Revise the Bachelor of Science in Journalism in the College of Media updates learning outcomes, removes course from core curriculum and thus updates hours of required major courses, two instances of adding an alternative course to a core curriculum course, adds 3 courses to a choose from list, adds clarifying text, updates the Journalism elective requirement to allow any journalism course not already being used to fulfill a major requirement, and removes the breakdown of general education courses from the bottom of the table and adds General Education statement to the top of the Program of Study table.
- 2) Revise the Bachelor of Science in Liberal Arts and Sciences in Actuarial Science in the College of Liberal Arts & Sciences removes course option from choose from list, replaces one 3 credit hour required course with another required course at 4 credit hours, adds several advanced elective options from a choose from list, revises advanced electives requirement from a specific number of courses to a specific number of credits, adds LAS Orientation coursework to the Program of Study table, and revises minimum required major and supporting coursework range of hours.
- 3) Revise the Bachelor of Fine Arts in Dance in the College of Fine and Applied Arts decreases 1 credit hour of DANC 360 and adds 1 credit hour of DANC 370 (thus: 1 less hour in physical practice and 1 additional hour in context) and adds advanced hours statement to program of study table.
- 4) Revise the Bachelor of Science in Chemistry in the College of Liberal Arts and Sciences removes CHEM 496, moves all footnotes up into the Program of Study degree requirements table, adds the college orientation course, e.g., LAS 101, combines the Technical Electives and Other technical courses sections, moves MATH courses from Technical Electives to the Mathematics section, removes the formal Free Electives requirement, and adds two MATH course options.
- 5) Revise the Concentration in Environmental Chemistry in the Bachelor of Science in Chemistry in the College of Liberal Arts and Sciences removes CHEM 496, moves all footnotes up into the Program of Study degree requirements table, adds the college orientation course, e.g., LAS 101, combines the Technical Electives and Other technical courses sections, moves MATH courses from Technical Electives to the Mathematics section, removes the formal Free Electives requirement, adds the major requirements as part of the campuswide concentration transparency project, adds several additional advanced course options into the required Technical Elective Courses list for this concentration, removes IB 485 from the list of Technical Elective Courses for the concentration, clarifies that the Technical

- Elective Courses for the concentration can be used to satisfy the Technical Electives for the major itself, and updates the MATH course options that may be used to satisfy the Technical Electives.
- 6) Revise the Bachelor of Science in Liberal Arts and Sciences in Chemistry in the College of Liberal Arts and Sciences removes CHEM 496, moves all footnotes up into the Program of Study degree requirements table, adds the college orientation course, e.g., LAS 101., simplifies the POS header text, and revises the displayed number of "Chemistry and biochemistry" hours.

#### B. **Graduate Programs**

- 1) Revise the Concentration in Data Science and Engineering in the Grainger College of Engineering and the Graduate College adds 4 participating programs and changes the elective statement from choosing two additional courses from an approved list to choosing two additional courses in consultation with the CSE Education Coordinator or CSE Director.
- 2) Revise the Campus Graduate Certificate in CPA Pathways in the Gies College of Business and the Graduate College revising program requirements from requiring at least one course from the first list of elective options and selection of 4 hours from the second list of elective options to select at least 2 credit hours from the first list of electives and select the balance of 12 credit hours from the first and second lists of electives.
- 3) Revise the Joint Program in the Master of Urban Planning in Urban Planning and the Juris Doctorate in Law in the College of Fine and Applied Arts, the College of Law and the Graduate College copies degree requirements and learning outcomes from MUP and JD distinct program pages and brings them into the Joint Program program page; embeds newly revised MUP requirements into this joint program; and creates joint program degree table and minimum hours tables to align with all MUP joint programs.
- 4) Revise the Master of Engineering in Mechanical Engineering in the Grainger College of Engineering and the Graduate College - creates a sub-heading "Technical Core" to encompass the ME or TAM course work; removes the Applied Math/Computational Science requirement, and increases the minimum credit hours of ME and TAM coursework from 12 to 16 and maximum from 20 to 24; moves the Professional Development Requirement up in the Program of Study to above the Elective requirement section and adds the word "Coursework" to the heading; explicitly lists the courses approved to count toward the professional development requirement in the Degree Requirements Table, replacing a broad statement that provided only one example; edits the statement requiring a minimum of 4 credit hours to be taken outside of the major department to "outside the ME rubric" and moves this statement from "Other Requirements and Conditions" to under the Elective Coursework section; deletes statements from Other Conditions and Requirements (1) "Elective course category may include a maximum of 4 hours of special topics credit" and (2) "Professional development category may include a maximum of 4 hours of special topics credit."; adds requirement: "No credit given towards degree for S/U or CR/NC graded classes."; deletes statement "Requirements and conditions may overlap." and adds (may overlap) next to the other requirements and conditions heading; revises Delivery Method responses and program code information to correct an administrative mistake; and changes the typical time to completion from 2 years to 5 years to correct administrative mistake.
- 5) Revise the Concentration in Autonomy and Robotics in the Master of Engineering in Engineering in the Grainger College of Engineering and Graduate College revises the requirement "A minimum of 12 500-level credit hours" to "A minimum of 12 500-level credit hours. ENG 572 and ENG 573 may not be used to satisfy this requirement."; and updates the list of electives. This list was included in the original proposals, but was never added to the catalog as intended. This revision puts the approved elective

- course list into the Program of Study section, removes 3 courses (one deactivated, 2 not currently taught), and lists cross-listed courses once.
- 6) Revise the Master of Social Work in Social Work in the School of Social Work and the Graduate College revises delivery mode from distance learning off site in Chicago to online learning, revises program of study table for concentration transparency by including core curriculum categories, and updates time to degree for accuracy.
- 7) Revise the Concentration in Advanced Clinical Practice in the Master of Social Work in Social Work in the School of Social Work and the Graduate College—revises delivery mode from distance learning to online learning and revises program of study to allow waiving of up to 8 hours of foundation coursework for those entering without a BSW due to coursework potentially taken during undergraduate program and moves up elective rows for transparency.
- 8) Revise the Concentration in Leadership & Social Change in the Master of Social Work in Social Work in the School of Social Work and the Graduate College removes 3 SOCW courses and adds 3 SOCW courses to keep relevant to changing macro social work practices and skill development, revises delivery mode from distance learning to online learning, and revises program of study to allow waiving of up to 8 hours of foundation coursework for those entering without a BSW due to coursework potentially taken during undergraduate program, moves up elective rows for transparency, and removes Focus Area from elective heading due to focus areas no longer existing.
- 9) Revise the Joint Program in the Master of Landscape Architecture in Landscape Architecture and the Master of Urban Planning in Urban Planning in the College of Fine and Applied Arts and the Graduate College copies learning outcomes from the MUP and MLA distinct program pages and embeds new revisions made to the MUP and MLA programs to bring them into the Joint Programs record, including adding 500 level hour requirement for UP to align with regular MUP program and clarifying that all MLA students would receive 8 hours counted from UP, so that the total degree hours is 80 for the joint program.

Date Submitted: 10/27/23 10:56 am

Viewing: 10KT0278BS: Journalism, BS

Last approved: 05/11/21 9:51 am

Last edit: 12/01/23 1:00 pm

Changes proposed by: Mira Sotirovic

Journalism, BS

Catalog Pages Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1642 Committee Chair
- 3. 1642 Head
- 4. KT Committee
  Chair
- 5. KT Dean
- 6. University
  Librarian
- 7. COTE Programs
- 8. Provost
- 9. Senate EPC
- 10. Senate
- 11. U Senate Conf
- 12. Board of Trustees
- 13. IBHE
- 14. HLC
- 15. DMI

# Approval Path

1. 11/01/23 10:47

am

Donna Butler

(dbutler):

Approved for U

Program Review

2. 11/03/23 12:59

pm

Alison Davis

(alison7):

Approved for 1642

Committee Chair

3. 11/06/23 9:58 am

Mira Sotirovic

(sotirovi):

Approved for 1642

Head

4. 11/07/23 1:32 pm Jenny Oyallon Koloski (joyallon):

Approved for KT

Committee Chair 5. 11/13/23 10:48 am Katie Clark (keclark): Approved for KT Dean 6. 11/21/23 12:12 pm Claire Stewart (clairest): Approved for University Librarian 7. 11/21/23 2:35 pm Suzanne Lee (suzannel): Approved for **COTE Programs** 8. 11/27/23 9:27 am Brooke Newell (bsnewell): Rollback to KT Dean for Provost 9. 11/27/23 11:05 am Katie Clark (keclark): Approved for KT Dean 10. 11/27/23 11:53 am Claire Stewart (clairest): Approved for University Librarian 11. 11/27/23 3:12 pm Suzanne Lee (suzannel): Approved for **COTE Programs** 12. 11/30/23 8:51 am Brooke Newell (bsnewell): Approved for Provost

#### History

1. May 11, 2021 by Stephanie Craft (scraft)

Major (ex. Special Education)

This proposal is

for a:

Revision

#### **Administration Details**

Official Program

Journalism, BS

Name

Diploma Title

Sponsor College Media, College of

Sponsor Journalism

Department

Sponsor Name <u>Mira Sotirovic</u> Stephanie Craft

Sponsor Email <u>sotirovi@illinois.edu</u> <u>scraft@illinois.edu</u>

College Contact Katie Clark College Contact

**Email** 

keclark@illinois.edu

College Budget

Officer

College Budget

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

College Contact

Does this program have inter-departmental administration?

No

# Proposal Title

Effective Catalog

Spring 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Bachelor of Science in Journalism in the College of Media

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

#### **Program Justification**

Provide a brief description of what changes are being made to the program.

- 1. Updating learning outcomes to reflect the outcomes listed in the Catalog.
- 2. Removing JOUR 220 from the core curriculum.
- 3. Adding JOUR 456 as an alternative course to JOUR 250 in the core curriculum.
- 4. Adding JOUR 310 as an alternative to JOUR 311 in the core curriculum.
- 5. Adding JOUR 400, JOUR 410, and JOUR 440 to the advanced skills course list.
- 6. Added the qualifier "department approval required" to JOUR 480.
- 7. Updating the Journalism elective requirement to allow any journalism course, not already being used to fulfill a major requirement.
- 8. Added headings to the program of study table Intermediate Skills Courses, Advanced Skills Courses, Context Courses.
- 9. Updated the hours of required major courses to 40 hours to reflect the removal of JOUR 220 from the core curriculum. Total credit hours for the degree will remain at 124 hours.
- 10. Removed the breakdown of general education courses from the bottom of the Program of Study table and added General Education statement to the top of the table.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

<u>No</u>

Why are these changes necessary?

- 1. Updating learning outcomes to reflect the outcomes listed in the Catalog. These were updated with the Learning Outcomes Assessment team and approved in the catalog but not updated in CIM-P.
- 2. Removing JOUR 220 from the core curriculum. This change is being made due to the changing composition of faculty and the inability to have someone available to teach it every semester. It will be available for students to take as a Journalism elective.
- 3. Adding JOUR 456 as an alternative course to JOUR 250 in the core curriculum. Both courses cover similar topics and meet the requirement set out by the Accrediting Council on Education in Journalism and Mass Communication. The choice provides students with additional flexibility. JOUR 456 is a new course that will give students a deeper understanding of how racial, ethnic and gender inclusion is critical for news media functioning and performance in a democratic society.
- 4. Adding JOUR 310 as an alternative to JOUR 311. Both courses discuss media law, with JOUR 310 contextualizing key media court cases in the era in which they took place and provides insights into how journalism and the news media evolved.
- 5. Adding JOUR 400, JOUR 410, and JOUR 440 to the advanced skills course list. These courses have been created since the last curriculum revision. They will provide the skills, knowledge, and experience required to be part of the advanced skills course list.
- 6. Added the qualifier "department approval required" to JOUR 480. This is an advanced reporting topics course, but it is possible that not all sections would be appropriate as advanced skills course. The qualifier helps to provide that clarity to students.
- 7. Updating the Journalism elective requirement to allow any journalism course, not already being used to fulfill a major requirement. The current curriculum requires that courses must be at the 200-level or higher, which limits the access students have to some introductory courses that may be of interest to them.
- 8. Added headings to the program of study table Intermediate Skills Courses, Advanced Skills Courses, Context Courses. These headings were being used as descriptors to students within advising appointments and in curriculum plans but were not appearing in the Catalog. These headings will help provide clarity for students regarding the degree requirements.
- 9. Updated the hours of required major courses to 40 hours to reflect the removal of JOUR 220 from the core curriculum. Total credit hours for the degree will remain at 124 hours. While it is likely students will take more than 40 hours due to many skills courses being 4 hours, we were encouraged to list the lowest number of hours required.
- 10. Removed the breakdown of general education courses from the bottom of the Program of Study table and added General Education statement to the top of the table. We made the change to simplify the look of the table and make it easier to read and

understand the major curriculum. We linked to the General Education requirements in the statement to make them accessible to those with questions.

40 hours of advanced coursework

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4 hours - JOUR 215 (pre-regs JOUR 200, JOUR 210)
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3 hours - JOUR 310 or JOUR 311

8 hours - Choose 2: JOUR 315, JOUR 340, JOUR 425

9 hours - Choose 3: JOUR 400, JOUR 410, JOUR 335, JOUR 430, JOUR 440, JOUR 445,

JOUR 471, JOUR 472, JOUR 480, JOUR 482, JOUR 483

3 hours - Choose 1: JOUR 450, JOUR 451, JOUR 454 or JOUR 460

6 hours - Required minor or specialization

7 hours - Free electives

As explained in the Program of Study table a specialization is a campus-approved minor, or one 18-hour specialization, or two 9-hour specializations (with at least 6 hours at the 300-level or above), approved by advisor.

#### 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 this new program/proposed change result in the replacement of another program?

No

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

No

#### Program Regulation and Assessment

## Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

<u>The learning outcomes have been revised to match the catalog description.</u>
The learning outcomes are:

- 1. The Journalism major meets the standards set forth by the Accrediting Council on Education in Journalism and Mass Communication and undergoes re-accreditation on a six-yearcycle. Assessment is one of the eight accreditation standards. Our curriculum is aligned with the competencies students in accredited programs are expected to achieve, whichinclude: understanding principles of free expression, journalism history, ethics and diversity; conducting and evaluating research and applying basic statistical concepts; mastery of reporting, visual, writing, editing and presentationskills. Understand We employ multiple direct and apply principles and laws related to media and freedom indirect measures of information
- 2. student learning (e.g. Write correctly and clearly in appropriate forms and styles
- 3. Apply basic numerical and statistical concepts
- <u>4. Apply current tools and technologies appropriate for the communications profession and to understand the digital world.</u>
- <u>5. Demonstrate understanding principles of the history of free expression, journalism development history, ethics and the role of professionals diversity; conducting and institutions in shaping communications</u>
- 6. evaluating research and applying basic statistical concepts; mastery of reporting, visual, writing, editing and presentation skills. Demonstrate an understanding of journalism ethical principles
- 7. Demonstrate understanding of diversity, both domestic and global
- 8. Understand concepts and apply theories in the use and presentation of images
- <u>9.</u> Conduct research and evaluate information by methods appropriate to the <u>profession</u>
- <u>10.</u> <u>Demonstrate an ability to think critically and evaluate their own work and that of others</u>
- 11. <u>Document professional practice through internships, student media and other publication of student work.</u> entrance and exit exams, portfolio reviews, internship evaluations, focus groups and grading data) as the accreditation standard requires.

Describe how, when, and where these learning outcomes will be assessed.

#### Describe here:

The Journalism major meets the standards set forth by the Accrediting Council on Education in Journalism and Mass Communication and undergoes re-accreditation on a six-year cycle. Assessment is one of the eight accreditation standards. Our curriculum is aligned with the competencies students in accredited programs are expected to achieve, which include: understanding principles of free expression, journalism history, ethics and diversity; conducting and evaluating research and applying basic statistical concepts; mastery of reporting, visual, writing, editing and presentation skills. We employ multiple direct and indirect measures of student learning (e.g. entrance and exit exams, portfolio reviews, internship evaluations, focus groups and grading data) as the accreditation standard requires.

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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/PublicAdminRules2017.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.

Revised programs <u>SampleSequence\_JOUR\_FA24.pdf</u>
Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

JOURNALISM (JOUR), prepares the next generation of journalists to explore and report on the diversity of ideas, people and events in a democratic society. Students learn the reporting, writing, editing, producing, and multimedia skills and concepts required to produce accurate, fair and thorough journalism and to navigate the ever-changing news media landscape. Journalism graduates combine strong professional training with a broad liberal arts education to pursue careers in online newsrooms, television and radio stations, newspapers and magazines and emerging media.

Statement for

Programs of Study Catalog

Minimum hours for graduation is 124, to include a minimum of 40 hours of upper-

division coursework generally at the 300- and 400-level. These hours can be drawn from

all elements of the degree.

<u>Students must complete the Campus General Education requirements including the campus general education language requirement.</u>

All required courses must be taken for a letter grade.

Course List

Code Title

Required Major Courses All required courses must be taken for a letter grade.

4.0

Required Major Courses

40

Hours

44-47

	Code	Title	Hours
	JOUR 200	Introduction to Journalism	3
	JOUR 205	History of American Journalism	3
- 1 '	or <u>JOUR 452</u>	Great Books of Journalism	
	JOUR 210	Newsgathering Across Platforms	4
- 1 '	JOUR 215	Multimedia Reporting	4
- 1 '	10UR 220	News Editing	4
	JOUR 250	Journalism Ethics & Diversity	3
	or <u>JOUR 456</u>	Race, Ethnicity & Gender in Journalism	
	<del>JOUR 311</del>	Media Law	3
١.	JOUR 310	Media Law in Historical Context	<u>3</u>
	or JOUR 311	Media Law	
	Intermediate Skills Cou	rses	
	Select two of the follow	ing:	8
	<u>JOUR 315</u>	Adv Public Affairs Reporting	
	<u>JOUR 340</u>	Video Reporting & Storytelling	
	<u>JOUR 425</u>	Multimedia Editing and Design	
4	Advanced Skills Course	<u>S</u>	
	Select three of the follo	wing:	9-12
	<u>JOUR 335</u>	Audio Journalism	
	<u>JOUR 400</u>	Newsroom Experience	
	<u>JOUR 410</u>	Data Storytelling for Journalists	
	<u>JOUR 430</u>	Augmented and Virtual Reality	
	<u>JOUR 440</u>	Advanced Documentary Storytelling & Production	
	<u>JOUR 445</u>	Advanced Television Reporting	
	<u>JOUR 471</u>	Science Journalism	
١,	<u>JOUR 472</u>	Business Reporting	
	<u>JOUR 480</u>	Advanced Reporting Topics (department approval required)	
	<u>JOUR 482</u>	Immersion Journalism	
	<u>JOUR 483</u>	Investigative Journalism	
- 1	Context Courses		_
	Select one of the follow	-	3
	JOUR 450	Media and Public Opinion	
	JOUR 451	Research Methods in Journalism (or equivalent)	
	JOUR 454	Propaganda & the News Media	
	<u>JOUR 460</u>	Special Topics (department approval required)	0
	Journalism Electives		9
	•	rse. Courses from the list above not used to complete requirements may be	
Н	taken as electives.		10
	Minor or Specialization	minor or one 10 hour encialization, or two 0 hour encializations (with at	18
		minor, or one 18-hour specialization, or two 9-hour specializations (with at 300-level or above), approved by advisor.	
	Statistical Methods Cou		3-4
	Statistical Methods Cou STAT 107	Data Science Discovery (recommended)	J- <del>H</del>
	STAT 107 STAT 100	Statistics	
	SOC 280	Intro to Social Statistics	
	PSYC 235	Intro to Social Statistics Intro to Statistics	
	ECON 202	Economic Statistics I	
Т	LCON ZUZ	Leonomic Statistics 1	

Code	Title	Hours
EPSY 280	Elements of Statistics	
<u>UP 116</u>	Urban Informatics I	
or other approved s	statistical methods course	
General Education Requ	<del>uirements</del>	<del>29-41</del>
The department mainta	ains a list of recommended courses to fulfill General Education requirements.	
Some courses may fulf	ill multiple General Education categories. Courses may also fulfill both major	
requirements and Gene	e <del>ral Education categories.</del>	
Composition I		4
<b>Advanced Composition</b>	(JOUR 200 can fulfill)	3
Quantitative Reasoning	I (statistical methods courses listed above can fulfill)	<del>3-4</del>
Quantitative Reasoning	<del>) II (JOUR 451 can fulfill)</del>	3
Humanities and the Art	t <del>s (JOUR 205, JOUR 452 can fulfill)</del>	3
Cultural Studies: Weste	ern Comparative	3
Cultural Studies: US Mi	inority Cultures	3
Cultural Studies: Non \	Western Cultures	3
Natural Science and Te	<del>chnology</del>	6
Social and Behavioral S	<del>Sciences</del>	6
Minimum Total Hours re	<del>equired for graduation</del>	<del>124</del>

Corresponding

BS Bachelor of Science

Degree

# Program Features

Academic Level Undergraduate

Does this major No

have transcripted concentrations?

What is the typical time to completion of this program?

4 years

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

124

CIP Code 090401 - Journalism.

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

# **Delivery Method**

This program is available:

On Campus - Students are required to be on campus, they may take some online courses.

#### Admission Requirements

Desired Effective Spring 2024

Admissions Term

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

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

The revision will streamline the program, remove barriers to graduation and potentially increase enrollment.

Estimated Annual Number of Degrees Awarded

Year One Estimate 5th Year Estimate (or when

fully implemented)

What is the Fall

matriculation term for this program?

# Budget

Are there No

budgetary implications for this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget

Information

Attach File(s)

#### Financial Resources

How does the unit intend to financially support this proposal?

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

No

Attach letters of

support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

Media rate

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

No

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

The revisions will offer a greater number of options for students to complete the program requirements. They will not have the impact on the numbers of faculty, class size, teaching loads or student-faculty ratios.

#### Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Library collections, resources and services are sufficient to support this program.

#### **EP** Documentation

EP Control EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal No

requires HLC

inquiry

#### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook BS: Journalism -UIUC

Name

Program Code: 10KT0278BS

MinorConcDegreeBSMajorCodeCodeCodeCode

0278

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

**DOE Approval** 

Date

Effective Date:

Attached

Document

Justification for

this request

Program Reviewer

Comments

Brooke Newell (bsnewell) (10/17/23 7:55 am): Rollback: Per request from Katie Clark.

**Brooke Newell (bsnewell) (10/23/23 11:55 am):** Rollback: Email sent to Mira and Katie Clark

Brooke Newell (bsnewell) (11/27/23 9:27 am): Rollback: Per discussion with

Katie

Key: 477

#### Journalism, BS

For students starting in Fall 2024 and beyond

This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

First Year			
First Semester	Hours	Second Semester	Hours
JOUR 200, Intro to Journalism	3	JOUR 210, Newsgathering Across Platforms	4
Journalism Elective	3	Statistical Methods Course	3
Composition I or General Education course	4-3	General Education course or Composition l	3-4
General Education course	3	General Education course	3
General Education course or Language Other Than English (3rd level)	3-4	Language Other Than English (3rd level) or General Education course	4-3

16 17

Second Year			
First Semseter	Hours	Second Semester	Hours
JOUR 205, History of American Journalism or JOUR 452, Great Books of Journalism	3	Intermediate Skills Course	4
JOUR 215, Multimedia Reporting	4	JOUR 250, Journalism Ethics & Diversity or JOUR 456, Race, Ethnicity & Gender in Journalism	3
General Education course	3	General Education course	3
General Education course	3	General Education course	3
Minor/Specialization course	3	Free Elective	3

16 16

Third Year			
First Semester	Hours	Second Semester	Hours
JOUR 310, Media Law in		Advanced Skills Course	
Historical Context or JOUR 311,	3		3-4
Media Law			
Intermediate Skills course	4	Journalism Elective	3
General Education course	3	Minor/Specialization course	3
Minor/Specialization course	3	Minor/Specialization course	3
Minor/Specialization course	3	Free Elective	3
	16		15

Fourth Year				
First Semseter	Hours	Second Semester	Hours	
Advanced Skills course	3-4	Advanced Skills course	4-3	
Context course	3	Journalism Elective	3	
Minor/Specialization course	3	Free Elective	3	
Free Elective	3	Free Elective	3	
Free Elective	3			
	15		13	

Total Hours 124

Date Submitted: 11/08/23 8:23 am

Viewing: 10KV0461BSLA: Actuarial

Science, BSLAS

Last approved: 01/24/22 10:49 am

Last edit: 12/01/23 1:01 pm

Changes proposed by: Lee DeVille

Actuarial Science, BSLAS

Catalog Pages Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1257 Head
- 3. KV Dean
- 4. University Librarian
- **5. COTE Programs**
- 6. Provost
- 7. Senate EPC
- 8. Senate
- 9. U Senate Conf
- 10. Board of Trustees
- 11. IBHE
- 12. HLC
- 13. DMI

# Approval Path

- 1. 11/10/23 5:41 pm Donna Butler (dbutler): Approved for U Program Review
- 2. 11/11/23 7:34 pm Lee DeVille (rdeville): Approved for 1257 Head
- 3. 11/21/23 11:46 am Stephen Downie (sdownie): Approved for KV
- Dean
- 4. 11/26/23 11:37 am Claire Stewart
  - (clairest): Approved for University
  - Librarian
- 5. 11/26/23 9:11 pm Suzanne Lee

(suzannel):
Approved for
COTE Programs

6. 11/30/23 8:51 am
Brooke Newell
(bsnewell):
Approved for
Provost

#### History

- 1. Feb 23, 2019 by Deb Forgacs (dforgacs)
- 2. Aug 23, 2019 by Deb Forgacs (dforgacs)
- 3. Jan 24, 2022 by Andrea Ray (aray)

Major (ex. Special Education)

This proposal is

for a: Revision

# Administration Details

Official Program

Actuarial Science, BSLAS

Name

Diploma Title

Sponsor College Liberal Arts & Sciences

Sponsor

Mathematics

Department

Sponsor Name Wei Wei Randy McCarthy, Professor and Director of

**Undergraduate Studies** 

Sponsor Email <u>weiw@illinois.edu</u> <u>rmccrthy@illinois.edu</u>

College Contact Stephen R. Downie College Contact

Email

sdownie@illinois.edu

College Budget

Michael Wellens

Officer

College Budget

Officer Email

wellens@illinois.edu

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Alison Champion, abc@illinois.edu, edits Lee DeVille, rdeville@illinois.edu, edits

Claudia Freiji, cnassif@illinois.edu, expert on SOA UEC program Alison Champion,

abc@illinois.edu

Does this program have inter-departmental administration?

No

#### Proposal Title

Effective Catalog

Fall 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Bachelor of Science in Liberal Arts and Sciences in Actuarial Science in the College of Liberal Arts & Sciences

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

# **Program Justification**

Provide a brief description of what changes are being made to the program.

The computer programming requirement is being updated to:

- 1. Remove the less-major-focused CS 105
- 2. A Statistics-controlled 3-credit required course, ASRM 450, which is cross-listed with STAT 420, is being replaced by a 4-credit ASRM course, ASRM 441, designed to meet requirements of the Society of Actuaries' (SOA) University-Earned Credit (UEC) program
- 3. Several new ASRM UEC courses are being added as options to the advanced electives: ASRM 442, ASRM 454, ASRM 455, ASRM 462. Additionally, since many of the new courses are more intense 4-hour classes, while the older offerings are mainly 3 hours, the advanced electives requirement is changed to a specific number of credits (12) instead of a specific number of courses (formerly 4).
- 4. Add LAS Orientation coursework to Program of Study table to fulfill University's

Orientation requirement.

5. The minimum required major and supporting course work range of hours has been changed to reflect a change in hours of one added course, but the total hours of the program remain unchanged.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

No

Why are these changes necessary?

- 1. With a well-staffed, fully-developed programming option available from ASRM, namely ASRM 195, it was felt that CS 105 could be dropped, both because ASRM students get a more intense or more major-specific experience from ASRM 195 or CS 124, and because ASRM is able to cover a significant amount of the instruction, with less-restricted course availability than when ASRM 195 was created.
- 2. The ASRM 441 course was created to provide a very tailored experience for Actuarial Science majors, which would also give all Actuarial Science students an equal footing to be prepared for the ASRM 441-442 sequence that offers a University-Earned Credit option.
- 3. Because we have a whole new set of courses that provide students with background to work towards their Associates and their Fellow in either the Society of Actuaries or the Casualty Actuarial Society, the two major accreditation bodies for the profession, it is clear that we should offer these options to students. To avoid penalizing students for choosing the more intense 4-credit UEC courses, we change the requirement to a credit hour requirement instead of a number of courses requirement. In the past, our students typically graduated with 3 actuarial exams completed. With the updated options, a student taking a path through the major with a minimal number of courses could graduate with credit for 5 exams.
- 4. Due to new guidance from campus for student transparency and clarity, we are also adding the required college orientation course into the POS.

40 hours of upper-division coursework:

MATH 241 - 4 hours (prerequisite MATH 231 + sequential prerequisite MATH 220)

ASRM 401 or STAT 400 - 4 hours

ASRM 402 or STAT 410 - 4 hours

ASRM 406 - 3 hours

ASRM 441 - 4 hours

"Select three or more of the following" list - 12 hours

"Three additional courses from" list, Free Electives - 9 hours

Total = 40 hours

#### 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 this new program/proposed change result in the replacement of another program?

No

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

Yes

Courses outside of the sponsoring department/interdisciplinary departments

<u>CS 105</u> - <u>Intro Computing: Non-Tech</u> <u>STAT 420</u> - <u>Methods of Applied Statistics</u>

Please attach any <u>STAT controlling dept LOA for ASRM cross listing in POS.pdf</u>

letters of <u>CS 105 approval.pdf</u>

support/acknowledgement

for any

Instructional

Resources

consider faculty,

students, and/or

other impacted

units as

appropriate.

# Program Regulation and Assessment

#### Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

Student Learning Outcomes:

- 1. Have sufficient exposure to actuarial and financial mathematics to be familiar with at least 80% of the material on five of the preliminary Society of Actuaries (SOA) credentialing exams.
- 2. Be familiar with the role of insurance in society, basic economic theory, and the basics of how insurance and financial markets operate.
- 3. Have familiarity with several of the technical tools, computer languages or software packages used by actuaries.
- 4. Develop communication, leadership and teamwork skills, and understand their importance in the actuarial industry.
- 5. Be able to apply this knowledge and these skills in new combinations and to new problems.

Questions explored towards these ends include:

What is the average number of professional exams passed before graduation? What is the passing rate of actuarial exams among graduating students? How many students find full-time jobs or are admitted to graduate schools?

To earn the Society of Actuaries' Center of Actuarial Excellence designation, our program is required to submit an annual report to the SOA that outlines key features of our program. Every five years, our program must submit to a thorough review by the SOA. The annual report contains information that aligns with Learning Outcomes outlined above. The key features included in the annual report include information on:

Curriculum: aligns with learning outcome 1

We must demonstrate that our courses cover 80% of 4 of the 6 preliminary actuarial exams offered by the SOA.

Graduate quality: indirect measure of all learning outcomes

Our program must produce graduates who are in demand by employers.

Integration with other relevant fields: aligns with learning outcomes 2, 3 and 4 Our program must demonstrate a connection to fields such as business and communication through coursework or other activities.

Connection to industry: indirect measure of all learning outcomes
We must demonstrate a connection to industry via recruiting efforts, guest speakers,
an advisory board, faculty experience and applied research.

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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

#### 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/PublicAdminRules2017.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.

Revised programs <u>20231107 - Sample Sequence Actuarial</u>

Science, BSLAS.docx

Comparative Table\_Actuarial Science.xlsx

Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

Departmental distinction: To qualify for distinction, the student must have a grade point average in ASRM courses of at least 3.25, and pass at least three examinations offered by the professional actuarial societies. To qualify for high or highest distinction, the student must have passed at least three professional exams, with highest distinction going to those whose grade point averages in mathematics are at least 3.75. Additional professional exams and participation in Illinois Risk Lab research may contribute to distinction decisions.

Statement for Programs of

Study Catalog

General education: Students must complete the Campus General Education requirements including the campus general education language requirement.

**Minimum required major and supporting course work:** normally equates to  $\underline{58-61}$   $\underline{57-61}$  hours including 32-33 hours of actuarial courses beyond calculus. Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours. Students will complete 40 hours of upper division

coursework generally at (the	se hours can be drawn from all elements of the 300- and 400-level. deg	<del>ıree).</del>
These hours can be drawn from	om all elements of the degree.	
Cou	rse List	
Code Title	Hours	
Orientation and Professional	<u>Development</u>	
	st Year Experience <u>1</u>	
<u>OR</u>		
	for International Students3	
<u>&amp; LAS 101</u> and Design Y OR	<u>Your First Year Experience</u>	
LAS 102 Transfer Advant	<u>age</u> <u>1</u>	
<u>Total Hours</u>	<u>1 or 3</u>	
	Course List	
Code	Title	Hours
Calculus sequence:		11-12
MATH 220	Calculus	
or <u>MATH 221</u>	Calculus I	
MATH 231	Calculus II	
MATH 241	Calculus III (or equivalent )	
Select one of the following:		3-4
ASRM 195	Foundations of Data Management	
CS 101	Intro Computing: Engrg & Sci	
<del>CS 105</del>	Intro Computing: Non-Tech	
CS 124	Introduction to Computer Science I	
<u>CS 125</u>	Introduction to Computer Science	
ASRM 210	Theory of Interest	3
Select one of the following se	•	7-8
ASRM 401	Actuarial Statistics I	
& <u>ASRM 402</u>	and Actuarial Statistics II	
OR		
STAT 400	Statistics and Probability I	
& STAT 410	and Statistics and Probability II	
ASRM 406	Linear Algebra with Financial Applications	3
ASRM 450	Methods of Applied Statistics	3
Select four of the following:		<del>12-13</del>
ASRM 441	Statistics for Risk Modeling I	<u>4</u>
	ollowing for a total of at least 12 credits:	<u>=</u> 12
ASRM 409	Stochastic Processes for Finance and Insurance	
ASRM 410	Investments and Financial Markets	
ASRM 442	Statistics for Risk Modeling II	
ASRM 451	Basics of Statistical Learning	
ASRM 454	Generalized Linear Models	
ASRM 455	Predictive Analytics	
ASRM 461	Loss Models	
ASRM 462	Advanced Loss Models, Credibility, and Ratemaking	
ASRM 469	Casualty Actuarial Mathematics	
ASRM 471	Life Contingencies I	
ASRM 471 ASRM 472	Life Contingencies II	
<u> </u>	Life Contingencies II	

Code	Title	Hours
Select an additional cou	rse from the above list or an approved section of ASRM 499	3
Announcements for ASF	RM 499 topics courses will include information about whether the topic is	
approved for use in the	major, as will the course syllabus.	
FIN 221	Corporate Finance	3
Three additional courses	s from:	9
ACCY 200	Fundamentals of Accounting	
ECON 302	Inter Microeconomic Theory	
ECON 303	Inter Macroeconomic Theory	
<u>FIN 230</u>	Introduction to Insurance	
<u>FIN 300</u>	Financial Markets	
<u>FIN 321</u>	Advanced Corporate Finance	
<u>FIN 431</u>	Property-Liability Insurance	
<u>FIN 432</u>	Managing Market Risks for Financial Institutions	
<u>FIN 434</u>	Employee Benefit Plans	
Total Hours		58-61

Corresponding BSLAS Bachelor of Science in Liberal Arts

Degree and Sciences

#### **Program Features**

Academic Level Undergraduate

Does this major No

have transcripted concentrations?

What is the typical time to completion of this program?

4 years

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

120

CIP Code 521304 - Actuarial Science.

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

# Delivery Method

This program is

available:

On Campus - Students are required to be on campus, they may take some online courses.

#### Admission Requirements

Desired Effective Admissions Term

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

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

No change to current admission requirements: Freshmen must meet LAS Admissions requirements. On-campus transfer students must complete the calculus sequence as prerequisites, plus ASRM 210 and one of ASRM 401 or STAT 400 with grades of B- or higher in each. Off-campus transfer students must meet LAS transfer requirements and complete at least Calculus II (sophomore transfer) or Calculus III and computer programming (junior transfer) with grades of B or higher in each math course taken.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

This revision may reduce the number of double-majors with Statistics but otherwise should maintain or increase the number of students who find the major to be of interest.

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

What is the Fall matriculation term for this program?

## Budget

Are there

Nο

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget

Information

N/A

Attach File(s)

#### Financial Resources

How does the unit intend to financially support this proposal?

We anticipate the same resources will be devoted to the revised program as are devoted to the program in its current form.

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

No

Attach letters of

support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

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

No

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

No expected impact on faculty resources

## Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Library collections, resources and services are sufficient to support this program.

#### **EP** Documentation

EP Control

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

No

requires HLC

inquiry

#### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook BSLAS: Actuarial Science - UIUC

Name

Program Code: 10KV0461BSLA

MinorConcDegreeBSLASMajorCodeCodeCodeCode

0461

Senate Approval

Date

Senate Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

**DOE Approval** 

Date

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer Comments **Brooke Newell (bsnewell) (08/02/23 8:39 am):** Rollback: Requested revisions to Justification, Instructional resources, Program of Study, and Library Resources sections.

Email sent to Lee, Alison, Stephen, and Andrea

Brooke Newell (bsnewell) (10/16/23 7:39 am): Rollback: Per request from Lee Brooke Newell (bsnewell) (10/19/23 3:40 pm): Rollback: Email sent to Lee,

Alison, Wei, Andrea and Stephen

Key: 228

# **Actuarial Science, BSLAS**

# Green = Course Addition Red = Course Removal Yellow = Updated Text or credit hours Orange = Order changed only

Key: 228

Current Requirements	Current Hours
Calculus through:	11-12
MATH 220 or MATH 221	
MATH 231	
MATH 241	
Select one of the following:	3-4
ASRM 195	
CS 101	
CS 105	
CS 124	
CS 125	
ASRM 210	3
C. 1	
Select one of the following sequences	7-8
(ASRM preferred): ASRM 401 & ASRM 402	
OR	
STAT 400 & STAT 410	
51A1 400 & 51A1 410	
ASRM 406	3
risituri 100	3
ASRM 450	3
Soloot form of the following:	12.12
Select four of the following:	12-13
ASRM 409	
ASRM 410	
ASRM 451	

Proposed Requirements	Proposed Hours
Orientation and Professional	
Development  LAS 101	1
	1
Or LAC 100 % LAC 101	3
LAS 100 & LAS 101	3
or LAS 102	1
LAS 102	1
TO A LIXE	1 2
Total Hours	1 or 3
Calculus as guerras	11-12
Calculus sequence: MATH 220 or MATH 221	11-12
MATH 220 OF MATH 221  MATH 231	
MATH 231 MATH 241	
MATH 241	
Salast one of the following:	3-4
Select one of the following:  ASRM 195	3-4
CS 101	
CS 101	
CS 124	
CS 125	
CS 123	
ASRM 210	3
AISICH 210	
Select one of the following sequences	7.0
(ASRM preferred):	7-8
ASRM 401 & ASRM 402	
OR	
STAT 400 & STAT 410	
ASRM 406	3
ASRM 441	4
Select three or more of the following for a	12
total of at least 12 credits:	12
ASRM 409	
ASRM 410	
ASRM 442	
ASRM 451	
ASRM 454	
ASRM 455	

ASRM 461	
ASRM 469	
ASRM 471	
ASRM 472	
Select an additional course from the above list or an approved section of ASRM 499	3
FIN 221	3
Three additional courses from:	9
ACCY 200	
ECON 302	
ECON 303	
FIN 230	
FIN 300	
FIN 321	
FIN 431	
FIN 432	
FIN 434	
m . 177	
Total Hours	57-61

FIN 300	
FIN 230	
ECON 303	
ECON 302	
ACCY 200	,
Three additional courses from:	9
FIN 221	3
	_
major, as weill the course syllabus.	
whether the topic is approved for use in the	
courses will include information about	
Announcements for ASRM 499 topics	
Select an additional course from the above list or an approved section of ASRM 499	3
ASRM 472	
ASRM 471	
ASRM 469	
ASRM 462	

# Sample Sequence for Actuarial Science, BSLAS

# http://catalog.illinois.edu/undergraduate/las/actuarial-science-bslas/#degreerequirementstext

First Year				
First Semester Courses	Hours	Second Semester Courses	Hours	
LAS 101	1	Free elective course	3	
MATH 220 or MATH 221 (Gen Ed: QR I)	4-5 (use 4)	MATH 231 (Gen Ed: QR I)	3	
ASRM 195 or CS 101 or CS 124 or CS 125	3-4 (use 3)	General Education Course	3	
Language Other Than English (3rd level)	4	Language Other Than English (4th level)	4	
Composition I or General Education Course	4	General Education Course or Composition I	3	
semester sum	16	semester sum	16	
Second Year				
First Semester Courses	Hours	Second Semester Courses	Hours	
MATH 241 (Gen Ed: QRII)	4	ASRM 401 or STAT 400	4	
ASRM 210	3	ASRM 406	3	
FIN 221	3	ACCY, FIN, or ECON from list	3	
General Education Course	3	General Education Course	3	
General Education Course	3	General Education Course	3	
semester sum	16	semester sum	16	

Third Year				
First Semester Courses	Hours	Second Semester Courses	Hours	
ASRM 402 or STAT 410	3-4 (use 3)	ASRM 400- level course from list	3	
ASRM 441	4	ASRM 400- level course from list	3	
ACCY, FIN, or ECON from list	3	ACCY, FIN, or ECON from list	3	
General Education Course	3	General Education Course	3	
General Education Course	3	General Education Course	3	
semester sum	16	semester sum	15	
Fourth Year				
First Semester Courses	Hours	Second Semester Courses	Hours	
ASRM 400- level course from list	3	ASRM 400- level course from list or approved ASRM 499	3	
Free elective course	3	Free elective course	3	
Free elective course	3	Free elective course	3	
Free elective course	4	Free elective course	3	
semester sum	13	semester sum	12	
Total Hours: 120 (Add up individual semester sums. Must <b>equal</b> degree total minimum				

hours requirement listed on the degree's requirements page in the catalog.)

#### Acknowledgement of change to Actuarial Science program

#### Gunter, Elsa <egunter@illinois.edu>

Wed 10/11/2023 4:26 PM

To:DeVille, Lee Xavier <rdeville@illinois.edu> Cc:Champion, Alison B <abc@illinois.edu>;Fleck, Margaret M <mfleck@illinois.edu>;Amato, Nancy <namato@illinois.edu>

#### Dear Prof DeVille,

The Department of Computer Science is aware of the Mathematics Department's intent to remove CS 105 from the Actuarial Science BSLAS degree and supports this change.

---Elsa

--

Elsa L Gunter
Research Professor
Associate Head for Academics
Department of Computer Science
University of Illinois at Urbana - Champaign



**Department of Statistics** 

Illini Hall, Room 101 725 South Wright Street Champaign, IL 61820 USA

August 9, 2023

Dear Professor Lee DeVille:

I would like to acknowledge that the Department of Statistics is aware that STAT 420/ASRM 450 will be dropped from the Actuarial Science major and we fully support this. We were in discussion with ASRM faculty about the new needs of the statistical modeling course and the close coordination with the Society of Actuaries this requires and agreed it makes sense to replace STAT 420 with the more specialized ASRM 441. Best of luck with this major and please let us know how we can help.

Sincerely,

Jeff Douglas

Professor and Associate Chair

Jeff Douglas

Department of Statistics

Date Submitted: 10/03/23 3:29 pm

Viewing: 10KR0261BFA: Dance, BFA

Last approved: 04/07/23 8:54 am

Last edit: 12/12/23 1:07 pm

Changes proposed by: Nicole Turner

Dance, BFA

Catalog Pages Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1801 Head
- 3. KR Dean
- 4. University Librarian
- **5. COTE Programs**
- 6. Provost

#### 7. Senate EPC

- 8. Senate
- 9. U Senate Conf
- 10. Board of Trustees
- 11. IBHE
- 12. HLC
- 13. DMI

# Approval Path

1. 10/04/23 11:25

am

Donna Butler

(dbutler):

Approved for U

Program Review

2. 10/04/23 11:51

am

Sara Hook

(sarahook):

Approved for 1801

Head

3. 10/20/23 10:48

am

Nicole Turner

(nicturn):

Approved for KR

Dean

4. 10/22/23 2:47 pm

Claire Stewart

(clairest):

Approved for

University

Librarian

5. 10/31/23 10:55

pm Suzanne Lee (suzannel): Approved for COTE Programs

- 6. 11/01/23 8:40 am
  Brooke Newell
  (bsnewell):
  Rollback to KR
  Dean for Provost
- 7. 12/01/23 8:52 am
  Nicole Turner
  (nicturn):
  Approved for KR
  Dean
- 8. 12/01/23 5:11 pm
  Claire Stewart
  (clairest):
  Approved for
  University
  Librarian
- 9. 12/01/23 5:33 pm Suzanne Lee (suzannel): Approved for COTE Programs
- 10. 12/07/23 9:32 am
  Brooke Newell
  (bsnewell):
  Approved for
  Provost

## History

- 1. Mar 21, 2019 by Deb Forgacs (dforgacs)
- 2. Dec 5, 2019 by Nicole Turner (nicturn)
- 3. Apr 16, 2021 by John Toenjes (jtoenjes)
- 4. Mar 16, 2022 by Nicole Turner (nicturn)
- 5. Sep 27, 2022 by Nicole Turner

(nicturn)
6. Apr 7, 2023 by
Nicole Turner

(nicturn)

Major (ex. Special Education)

This proposal is

for a: Revision

#### **Administration Details**

Official Program

Dance, BFA

Name

Diploma Title Bachelor of Fine Arts in Dance

Sponsor College Fine & Applied Arts

Sponsor Dar

Dance

Department

Sponsor Name Prof. Rachel Rizzuto John Toenjes

Sponsor Email rizzuto3@illinois.edu <u>itoenjes@illinois.edu</u>

College Contact Dr. Nicole Turner College Contact

Email

nicturn@illinois.edu

College Budget

Greg Anderson

Officer

College Budget

gnanders@illinois.edu

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

KR Dean (nicturn@illinois.edu)

Does this program have inter-departmental administration?

Nο

## Proposal Title

Effective Catalog Fall 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Bachelor of Fine Arts in Dance in the College of Fine and Applied Arts

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

## **Program Justification**

Provide a brief description of what changes are being made to the program.

Decrease 1 course hour (1 credit hour less of DANC 360) and add 1 new course hour (DANC 370 for 1 hour) to BFA program. Adding advanced hours statement to degree table. No change to total degree hour requirement hours or total degree hours.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

No

Why are these changes necessary?

Reason for changes:

In a review of the Dance BFA, the unit desired to minimally reduce the credit hours in physical practice to enable students to earn appropriate curricular credit for required work previously completed outside of designated curricular credit. DANC 370 allows for students to earn 1 credit hour while they complete their junior spring articulation proposals, previously completed outside of designated curricular credit.

#### Details of changes:

- 1. Decrease total hours required of DANC 360 [course title: Dancing Tech III] (-1 hr)
- 2. Add new course DANC 370 [course title: Articulate] for 1 credit hour (+1 hr)
- 3. These changes lead to 1 less hour in physical practice and 1 additional hour in context, with no change to total degree hour requirements or total degree hours.
- 4. Adding recommended text for minimum degree hours and advanced hours as required by IBHE.

40 advanced hours requirement:

DANC 360 - 2 hrs

DANC 460 - 4 hrs

DANC 370 - 1 hr

Creative Prac elective - 3 hrs

DANC 345 - 3 hrs

DANC 350 - 4 hrs

DANC 441 - 3 hrs

DANC 495 - 2 hrs

DANC 375 - 1 hr

DANC 498 - 2 hrs

DANC 499 - 2 hrs

13 hrs general education or free electives

#### 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 this new program/proposed change result in the replacement of another program?

No

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

No

## Program Regulation and Assessment

# Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

Upon graduation, new alumni of the Bachelor of Fine Arts Program will be able to:

- 1. Dance with full mind-body awareness, energy, skill, musicality, passion and imagination in African-and European-informed movement practices.
- 2. Confidently teach a class that evinces deep physical and contextual understanding of a movement practice while paying attention to community building, safety, inclusiveness, and strategic educational engagement.
- 3. Communicate ideas about dance through physicality, written and oral platforms both in person and online, in publication or publicity that evidence clarity and consideration of multiple perspectives.
- 4. Utilize technology and various media both as a creative tool and as a means for increasing positive visibility for dance.
- 5. Articulate the socio-political, cultural, historical impact of Dance and its potential to contribute to global dialogue and inquiry.
- 6. Participate in and develop creative processes, conduct choreographic and performative research, and disseminate that research in theatrical events.
- 7. Utilize various approaches to the body and understand the context in which those approaches were founded.
- 8. Model good citizenship and community-building in their future environments.

The Undergraduate Director leads the assessment process. The director works with the department head and the Undergraduate Committee to accomplish the goals of the program. The Department of Dance holds two annual "retreat" style faculty meetings to study assessment processes and make evaluations for curricular change. Regular assessment reports based upon student surveys, as well as larger efforts such as the National Association of Schools of Dance assessment review, last completed in 2017, and Provost's Academic Review, last completed in 2021, are reviewed and analyzed, and changes/updates are implemented.

#### Assessment Instruments include:

- · Undergraduate and Graduate Exit Surveys
- · Alumni Surveys
- · Guest Artist Surveys
- · Undergraduate and graduate student boards meet regularly with the Head and/or UG/G Directors to assess the program
- · <u>Townhalls</u>: <u>Sophomore Review</u>: <u>Faculty evaluate student progress towards graduation</u> and career potential through performance and written materials and <u>aninterview</u>. <u>Townhalls</u>:1–2 departmental meetings each semester for information and resource sharing between students and faculty.
- · UG Curricular Feedback Session: Annual spring forum for UG to provide feedback to the Head and UG Director about curriculum, performance, casting, or other issues.
- $\cdot$  One-on-one evaluative meetings at midterm in every course between students and faculty each semester

#### Metrics include:

· BFA senior thesis project, in which faculty assess the achievement of the programmatic objectives

- $\cdot$  Faculty observations of student performance on a regular basis to make sure students are progressing toward meeting objectives
- · Regular review of alumni employment, entrance into graduate programs, performances mounted, and awards and honors received

The University of Illinois at Urbana-Champaign is accredited by the National Association of Schools of Dance, and regularly undergoes accreditation review.

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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/PublicAdminRules2017.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.

Catalog Page Text - Overview Tab

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

The BFA program in Dance offers intense dance training, multicultural movement practices, and meaningful interactions with faculty that prepare students to enter the world of dance as professional dancers and informed citizens. Each year of the students' education has a theme that designates a gestalt of competencies designed to progress yearly through the curriculum. First-years ACTIVATE (through technique classes, repertory and a first semester performance experience); sophomores DELVE (taking multiple physical practice, context and creative practice classes and being reviewed by a faculty committee); juniors ARTICULATE (with one semester spent abroad or on campus taking multi-disciplinary coursework); and seniors LAUNCH (taking career seminar, connecting with an alumni mentor, and producing their own work).

The BFA curriculum offers coursework in the areas of technique, composition, performance, theory, media, career preparation, improvisation, music studies, pedagogy, history, movement sciences, and repertory. Electives may be taken in a range of techniques, choreographic laboratory, and independent studies.

Specific Program requirement areas are as follows:

4 credits in Foundations, 26 27 credits in Physical Practice, 8 credits in Creative Practice, 8 credits in Performance, 3 credits in Production, 21 20 credits in Context, 5 credits in Synthesis, and 5-7 credits in Focused Electives.

Evaluation of majors is an ongoing process. Continued enrollment in the program is contingent upon satisfactory performance. A student is expected to maintain a minimum 2.75 grade point average in all dance coursework in order to remain in good standing in the department.

It is possible for transfer students to complete degree requirements in a three-year period contingent upon prior completion of general education requirements.

A total of 130 hours is required for this degree.

Statement for

Programs of Study Catalog

Minimum hours for graduation is 130, to include a minimum of 40 hours of upperdivision coursework generally at the 300- and 400-level. These hours can be drawn from all elements of the degree.

Minimum hours forgraduation: 130hours. Dance coursework grade point average minimum: 2.75 Course List

Code	Title	Hours
General Education Requirements		
Composition I		4-6
Advanced Composition		3-4
Humanities & the Arts		6-8
Social & Behavioral Sciences		6-8
Cultural Studies: Non-Western Cultures		3-4
Cultural Studies: U.S. Minority Cultures		3-4

Natural Scient Quantitative The Language -Successf -Successf -Demonst	ge Requirement may be solutly completing a third-solution, in high solutions at the crating proficiency at the by the College of Libera Course List the Courses	satisfied by: semester college-level shool, of the third year third-semester level i	course in a language other than English; of a language other than English; or n a language proficiency examination d the appropriate department.	Hours 3-4 6-10 6-9
	ie Green Room (variable	& repeatable)3		
	Course Li	st		
Code	Title		Hours	
Physical Pra	ctice		26	
DANC 160	Dancing Techniques I (v	/ariable & repeatable)	4	
<b>DANC 245</b>	Mindful Movement (rep	•	2	
<u>DANC 256</u>	Choreographic Laborato	•	1	
DANC 260	Dancing Techniques II (	•		
DANC 270	Dancing in Community	• • •	3	
DANC 360	Dancing Techniques III	•		
DANC 460	Dancing Techniques IV	•	•	
	e following Physical Prac	tice electives:	5	
	OLyric Theatre Dance Olympia Musical Theater Dance			
	Dancing Techniques Ele	ctivo		
	Choreographic Laborato			
	Physical Practice Study	•		
	Dancing in Community			
DAILE IA	Course List	111 0.17		
Code T	itle	Hour	S	
Creative Pra		7-8		
	Dance Improvisation I	2		
	Choreographic Process I	2		
	the following Creative F	Practice electives:		
	Choreographic Process II			
DANC 465	Screendance	3		
	Cou	rse List		
Code Tit	tle		Hours	
Performance			8	
DANC 220Ur	ndergraduate Performand	ce Practice (variable &	repeatable)4	
DANC 232Re	epertory Company (repea	atable)	4	
_	Course List			
Code	Title	Hours		
Production		3		
Choose from	the following:			

Code Title Hours

DANC 131Production Practicum I

DANC 231Production Practicum II

DANC 330Dance Documentation

DANC 331Production Practicum III

DANC 431Production Practicum IV

Course List

Code	Title	Hours
Context		21
<b>DANC 162</b>	Viewing Dance	1
<b>DANC 240</b>	Context	4
<b>DANC 345</b>	Dance Anatomy and Kinesiology	3
<b>DANC 350</b>	Teaching Dance	4
<b>DANC 370</b>	<u>Articulate</u>	<u>1</u>
<b>DANC 441</b>	Dance History Seminar	3
<b>DANC 495</b>	Senior Career Seminar (repeatable)	2
		_

Course in School of Art + Design, School of Music, or Theatre Department3

Course List

Code	Title	Hours
Synthesis		5
<u>DANC 375</u>	Thesis Think Tank	1
DANC 498	BFA Thesis Production	2
DANC 499	BFA Thesis Project	2
Focused Electives		5-7

Focused electives, chosen in consultation with an advisor. Additional courses in dance such as technique, mindful movement, performance, study abroad credit, collaborative performance, or coursework in performance/performance studies in the departments of Theater or Media & Cinema Studies or the Schools of Music or Art and Design.

Free electives as needed to reach a minimum of 130 hours

A minimum of 40 credits at the 300 or 400 course level are required

Total Hours for the Bachelor of Fine Arts in Dance 130

Corresponding

BFA Bachelor of Fine Arts

Degree

# Program Features

Academic Level Undergraduate

Does this major No

have transcripted concentrations?

What is the typical time to completion of this program?

4 years

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

130

CIP Code 500301 - Dance, General.

Will specialized accreditation be sought for this program?

No

# Delivery Method

This program is available:

On Campus - Students are required to be on campus, they may take some online courses.

### Admission Requirements

Desired Effective Admissions Term

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

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

In addition to university admission requirements—application, high school transcript, and test scores (where applicable)—admission requirements for the BFA in dance include successful completion of an audition process, comprised of dance technique class, a solo performance, and interview with faculty. Transfer students must follow same audition process for admission.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

No impact.

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

What is the

Fall

matriculation term for this program?

# Budget

Are there No

budgetary

implications for

this revision?

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

Nο

Additional Budget Information

Attach File(s)

#### Financial Resources

How does the unit intend to financially support this proposal?

Program revision does not alter current financial resources used to support the program.

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

No

Attach letters of support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

Fine & Applied Arts Differential Undergraduate Rate

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

No

## Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

No impact to faculty resources.

## Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Library collections, resources and services are sufficient to support this BFA program revision.

#### **EP** Documentation

**EP Control** 

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

requires HLC

inquiry

No

#### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook

BFA:Dance -UIUC

Name

Program Code: 10KR0261BFA

MinorConcDegreeBFAMajorCodeCodeCodeCode

0261

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

DOE Approval

NA

Date

Effective Date:

Attached

Document

Justification for

this request

Program Reviewer

Comments

Brooke Newell (bsnewell) (10/03/23 3:17 pm): Rollback: Email sent to Nicole Brooke Newell (bsnewell) (11/01/23 8:40 am): Rollback: Per discussion with

Nicole, Waiting on DANC 370 to go through workflow.

Key: 133

#### Dance, BFA Sample Schedule First Year HOURS FIRST SEMESTER **SECOND SEMESTER HOURS** Composition I or Language Other than English (3rd level) 4 Composition I or Language Other than 4 English (3rd level) 1 DANC 150 1 FAA 101 **DANC 150** 1 DANC 160 2 **DANC 160** 2 DANC 270 1 **DANC 270** 1 DANC 232 2 General Education course 3 DANC 162 1 General Education course 3 General Education course 3 2 Free Elective course **15** 16 **Second Year HOURS FIRST SEMESTER** HOURS SECOND SEMESTER **DANC 150** 1 DANC 245 1 3 **DANC 256** 1 DANC 260 **DANC 260** 2 DANC 362 2 1 **DANC 270** 1 DANC 220 2 Production Course List course 1 **DANC 259 DANC 262** 2 DANC 240 4 1 DANC 350 **DANC 220** 4 DANC 232 2 Free Elective course 1 General Education course 3 1 Free Elective course 16 **17** Third Year FIRST SEMESTER HOURS SECOND SEMESTER **HOURS DANC 245** 1 DANC 375 3 **DANC 360** 2 Focused Electives 2 Physical Practice course from '5 hours' list 2 **DANC 362** 3 Physical Practice course from '5 hours' list 2 General Education course 3 1 General Education course **DANC 220** 3 General Education course 3 **DANC 345** 2 DANC 441 3 Free Elective course Free Elective course 2 **DANC 370** 1 **17** 17 **Fourth Year** FIRST SEMESTER **HOURS SECOND SEMESTER HOURS** Ρ D D D P D

	Total House 120	
	16	16
General Education course	3	
General Education course	3 Free Elective course	1
Focused Electives	2 Free Elective course	3
DANC 220	1 General Education course	3
Physical Practice course from '5 hours' list	Course in School of Art + Design, School of Music, or Theatre Department	3
<u>DANC 499</u>	1 DANC 499	1
<u>DANC 498</u>	1 DANC 498	1
<u>DANC 495</u>	1 DANC 495	1
Production Course List course	1 Production Course List course	1
<u>DANC 460</u>	2 DANC 460	2

# Program Change Request

Date Submitted: 12/15/23 12:22 pm

Viewing: 10KV0335BS: Chemistry, BS

Last approved: 05/11/21 3:22 pm

Last edit: 01/12/24 9:32 am Changes proposed by: Scott Silverman

Chemistry, BS

Catalog Pages

Chemistry: Environmental Chemistry, BS

Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1413 Head
- 3. SOCS Head
- 4. KV Dean
- 5. University Librarian
- 6. COTE Programs
- 7. Provost

#### 8. Senate EPC

- 9. Senate
- 10. U Senate Conf
- 11. Board of Trustees
- 12. IBHE
- 13. HLC
- 14. DMI

## **Approval Path**

- 1. 12/18/23 5:27 pm
   Donna Butler
   (dbutler):
   Approved for U
   Program Review
- 2. 12/18/23 5:53 pm Scott Silverman (sks): Approved for 1413 Head
- 3. 12/18/23 7:51 pm Paul Kenis (kenis): Approved for SOCS Head
- 4. 01/04/24 4:12 pm Stephen Downie (sdownie): Approved for KV Dean
- 5. 01/04/24 4:40 pm Claire Stewart (clairest): Approved for University Librarian

6. 01/04/24 8:31 pm Suzanne Lee (suzannel): Approved for COTE Programs

7. 01/11/24 9:30 am
Brooke Newell
(bsnewell):
Approved for
Provost

### History

- 1. Mar 21, 2019 by Deb Forgacs (dforgacs)
- 2. Apr 6, 2019 by Deb Forgacs (dforgacs)
- 3. May 12, 2020 by Amy Elli (amyelli)
- 4. May 18, 2020 by Deb Forgacs (dforgacs)
- 5. Feb 11, 2021 by Amy Elli (amyelli)
- 6. May 11, 2021 by Amy Elli (amyelli)

Major (ex. Special Education)

This proposal is

for a: Revision

#### Administration Details

Official Program

Chemistry, BS

Name

Diploma Title

Sponsor College Liberal Arts & Sciences

Sponsor

Chemistry

Department

Sponsor Name Scott <u>K. Silverman</u> <u>Silverman</u>

Sponsor Email sks@illinois.edu

College Contact Stephen R. Downie Kelly Ritter

College Contact

Email <u>sdownie@illinois.edu</u> <u>ritterk@illinois.edu</u>

College Budget

Michael Wellens

Officer

College Budget

wellens@illinois.edu

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Scott K. Silverman, sks@illinois.edu

Does this program have inter-departmental administration?

No

## Proposal Title

Effective Catalog

Fall 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Bachelor of Science in Chemistry in the College of Liberal Arts and Sciences

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This Chemistry, BS proposal (key 272) is related to the Chemistry, BSLAS proposal (key 271) and the Chemistry: Environmental Chemistry, BS proposal (key 623).

## **Program Justification**

Provide a brief description of what changes are being made to the program.

We are proposing six changes. (1) Removing CHEM 496, which has been deactivated. This was a footnote as a substitution option for transfer students only. (2) Moving all footnotes up into the Program of Study degree requirements table. (3) Adding the college orientation course, e.g., LAS 101. (4) In the POS table, combining the Technical Electives and Other technical courses sections, and moving MATH courses from Technical Electives to the Mathematics section. (5) Removing the formal Free Electives requirement, which served no purpose in that the students are already taking all such courses simply to reach the 120 hours degree requirement. (6) Adding two MATH course options.

Total credit hours will not change.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021

catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)  $\underline{\text{No}}$ 

Why are these changes necessary?

- 1. Removal of CHEM 496 because the course has been deactivated. This was a footnote as a substitution option for transfer students only.
- 2. Due to new guidance from campus for student transparency and clarity, footnotes are integrated into the POS.
- 3. The required college orientation course is added into the POS.
- 4. In the POS table, we are combining Technical Electives and Other technical courses into one category, because these were not actually separate requirements, which led to confusion. Also we are moving all MATH courses into a single Mathematics category, rather than split between two categories. The POS now more clearly, and without any overlap between categories, lists the requirements for each category of course work: Core Chemistry, Advanced Chemistry, Mathematics, Physics, and Technical Electives. The underlying requirements and number of hours (both for each category and in total) are not changed.

Explanation of why the Technical Electives requirement is listed as "7-9 hours": The existing Technical Electives requirement is 14 hours, but this includes one of MATH 225 (2 hours) or MATH 415 (3 or 4 hours) as well as MATH 285 (3 hours). Therefore, the actual existing Technical Electives requirement, after subtracting the two MATH courses, is 7-9 hours. We are maintaining this Technical Electives requirement, now that Mathematics is listed as a separate category.

- 5. We are removing the formal Free Electives requirement, which served no purpose in that the students are already taking all such courses simply to reach the 120 hours degree requirement.
- 6. We are updating the MATH course options to include two additional options, MATH 227 and MATH 257, each of which has a valuable computational component. The detailed justification follows.

At present, the Chemistry, BS program currently allows the linear algebra requirement to be satisfied by taking either MATH 225 (Introductory Matrix Theory) or MATH 415 (Applied Linear Algebra). We are proposing to add both MATH 227 (Linear Algebra for Data Science) and MATH 257 (Linear Algebra with Computational Applications) to the options satisfying the linear algebra requirements. With this proposal, the options will include that any of MATH 225, MATH 227, MATH 257, or MATH 415 can be used by Chemistry, BS majors to satisfy the linear algebra requirement.

MATH 227 and MATH 257 serve similar purposes as MATH 225 and MATH 415 in that they are introductory linear algebra linear algebra courses. From the perspective of the Chemistry, BS major, linear algebra is necessary to prepare students for CHEM 442 and CHEM 444, Physical Chemistry I and II, which require students to have a preexisting knowledge of matrices, vectors, matrix-matrix and matrix vector multiplication, determinants, dot products, orthonormalization, and diagonalization. All four MATH courses teach all of these subjects and are thus well-suited to satisfying the Chemistry, BS major requirements.

There are additional merits to including MATH 227 and MATH 257, which provide potential future advantages compared to the existing MATH 225 and MATH 415 options. First, MATH 227 and MATH 257 include computational components that MATH 225 lacks. These computational components allow students to develop practical programming skills for applying linear algebra to real science and engineering problems of relevant to modern society. Second, both MATH 227 and MATH 257 are lower-level course listings (200-level) than MATH 415, which is a course targeted primarily to Math or CS majors. In the modern era, data science and machine learning dominate the news headlines, and we believe that allowing Chemistry majors to fulfill the linear algebra requirement with MATH 227 or MATH 257 is critical to aligning the undergraduate Chemistry curriculum with modern standards in which computing and data analysis are essential. This direction is also tightly aligned with broader campus efforts to develop CS+X and DS+X degree programs, which use MATH 227 and MATH 257 as their baseline linear algebra courses. Third, adding this flexibility to the linear algebra requirement will future-proof the Chemistry major to modifications in the linear algebra courses offered on campus, while still allowing classes to transfer as courses that work for the Chemistry degree so that our transfer students can graduate in a reasonable amount of time.

Chemistry, BS (Specialized Curriculum) 40 hours upper division sample plan:

#### Required courses:

CHEM 312 - 3 hours

CHEM 315 - 2 hours

CHEM 420 - 2 hours

CHEM 436 - 3 hours

CHEM 442 - 4 hours

CHEM 444 - 4 hours

CHEM 445 - 2 hours

sum: 20 hours

11 hours Advanced Chemistry - all options are 300 or 400 level

The above add up to 31 hours, so at least 9 more qualifying hours are needed, likely coming from some combination of the following:

CHEM 236 - 4 hours (prerequisites: CHEM 104 or 204 or 222/223, all of which require CHEM 102)

CHEM 237 - 2 hours (prerequisites: credit or concurrent registration in CHEM 236, which requires CHEM 104 or 204 or 222/223, all of which require CHEM 102)

MATH 241 - 4 hours (prerequisites: MATH 220/221 and 231)

MATH 257 - 3 hours (prerequisites: CS 101 and MATH 220/221)

MATH 285 - 3 hours (prerequisites: MATH 241, which requires MATH 220/221 and 231)

MATH 415 - 3 hours (prerequisites: MATH 241, which requires MATH 220/221 and 231)

PHYS 212 - 4 hours (prerequisites: PHYS 211 and credit or concurrent enrollment in

MATH 241, which requires MATH 220/221 and 231)

PHYS 214 - 2 hours (prerequisites: PHYS 211 and 212)

#### Total equals 40 hours

#### 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 this new program/proposed change result in the replacement of another program?

Nο

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

Yes

Courses outside of the sponsoring

department/interdisciplinary

departments

MATH 227 - Linear Algebra for Data Sci

MATH 257 - Linear Algebra w Computat Appl

Please attach any <u>supporting letter MATH.pdf</u>

letters of

support/acknowledgement

for any

Instructional

Resources

consider faculty,

students, and/or

other impacted

units as

appropriate.

# Program Regulation and Assessment

## Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

<u>Unchanged from the Learning Outcomes listed at http://catalog.illinois.edu</u>/undergraduate/las/chemistry-bs/#learningoutcomestext

Students graduating with the BS in Chemistry will have:

- 1. A thorough knowledge of the basic principles of chemistry, including atomic and molecular structure, chemical dynamics and the chemical and physical properties of substances.
- 2. An exposure to the subfields of chemistry, such as analytical, organic, physical, materials, inorganic, as well as chemical biology.
- 3. The ability to read, evaluate, interpret, and present (via oral and written communication) numerical, chemical and general scientific data, information and literature.
- <u>4.</u> The ability to carry out experiments, use appropriate experimental apparatus effectively, and demonstrate proper laboratory safety skills. Because we are removing the CHEM 152 requirement that was never actually implemented in the first place, we have no plan to do such an assessment.

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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

# 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/PublicAdminRules2017.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.

Revised programs <u>Comparative Table Chemistry,</u>

BS\_SKS01.xlsx

SS Chemistry BS SKS04.docx

Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

#### Specialized Curriculum

<u>Graduation requires grade point averages of at least 2.0 overall and 2.0 in chemistry, mathematics, and physics courses.</u>

Students in the Specialized Curriculum in Chemistry must include a course in Biochemistry in the Advanced Chemistry area or the Technical Electives area to be certified by the American Chemical Society as having met its specifications.

Departmental distinction: Students qualify for graduation with distinction by exhibiting superior performance in both course work and in senior thesis research. To be eligible, a student must have a UIUC coursework major grade point average of 3.25, must take CHEM 499 (normally for two semesters) and submit a senior thesis for evaluation, and must have their undergraduate research advisor submit to the department Head a letter of support attesting to the effort invested by the student. The minimum major GPAs for Distinction, High Distinction, and Highest Distinction are 3.25, 3.5, and 3.75, respectively. Final decisions on awarding Distinction honors will be made by the Head or designee.

Statement for

Programs of Study Catalog

**General education:** Students must complete the <u>Campus General Education</u> requirements including the campus general education language requirement.

Minimum hours required for graduation: <u>120 hours</u>, to include a minimum of 40 hours of upperdivision coursework generally at the 300 and 400 level. <u>These hours can be drawn from all elements of the degree</u>.

Course List

Code Title Hours

Orientation and Professional Development

LAS 101 Design Your First Year Experience 1

<u>OR</u>

<u>LAS 100</u> <u>Success in LAS for International Students3</u>

& LAS 101 and Design Your First Year Experience

<u>OR</u>

Core Chemistry 1

<u>LAS 102</u> <u>Transfer Advantage</u> <u>1</u>

<u>Total Hours</u> <u>1 or 3</u>

Course List

Code Title Hours

Major Core Requirements and Electives

<del>37</del>

Code	Title	Hours
Core Chemistry		<u>37</u>
<u>CHEM 150</u>	First Semester Success in Chemistry (On- and off-campus transfer students in the	
	BS curriculum may substitute 1 additional hour of 200 level or higher Chemistry	
	[including <u>CHEM 297</u> , <u>CHEM 397</u> , <u>CHEM 497</u> , or <u>CHEM 499</u> ] for <u>CHEM 150</u> . This	
	may not include <u>CHEM 222</u> or <u>CHEM 223</u> for students who took the <u>CHEM 102</u> ,	
	CHEM 103, CHEM 104, and CHEM 105 sequence instead of CHEM 202, CHEM 203,	
	<u>CHEM 204</u> , and <u>CHEM 205</u> .)	
<b>CHEM 202</b>	Accelerated Chemistry I	
<b>CHEM 203</b>	Accelerated Chemistry Lab I	
<b>CHEM 204</b>	Accelerated Chemistry II	
<u>CHEM 205</u>	Accelerated Chemistry Lab II	
If necessary,	, <u>CHEM 102</u> , <u>CHEM 103</u> , <u>CHEM 104</u> , <u>CHEM 105</u> , <u>CHEM 222</u> , and <u>CHEM 223</u> may be	
substituted f	for <u>CHEM 202, CHEM 203, CHEM 204</u> , and <u>CHEM 205</u> .	
CHEM 236	Fundamental Organic Chem I	
<b>CHEM 237</b>	Structure and Synthesis	
<b>CHEM 312</b>	Inorganic Chemistry	
<b>CHEM 315</b>	Instrumental Chem Systems Lab	
CHEM 420	Instrumental Characterization	
<b>CHEM 436</b>	Fundamental Organic Chem II	
<b>CHEM 442</b>	Physical Chemistry I	
<b>CHEM 444</b>	Physical Chemistry II	
<b>CHEM 445</b>	Physical Principles Lab I	
Advanced Chen	nistry	11
CHEM or BIC	OC courses numbered 300 or higher, which must include three laboratory courses	
from the foll	owing:	
<b>CHEM 317</b>	Inorganic Chemistry Lab	
<b>CHEM 437</b>	Organic Chemistry Lab	
CHEM 447	Physical Principles Lab II 4	
<u>CHEM 447</u>	Physical Principles Lab II	
<u>CHEM 483</u>	Solid State Structural Anlys	
<b>BIOC 455</b>	Technqs Biochem & Biotech	
CHEM 317	Inorganic Chemistry Lab	
CHEM 437	Organic Chemistry Lab	
A student wl	ho has earned at least 6 credit hours in any combination of CHEM 397, CHEM 497,	
or <u>CHEM 499</u>	must complete only two laboratory courses from the list, one of which must be	
<u>CHEM 317, (</u>	<u>CHEM 437</u> , or <u>CHEM 447</u> .	
Mathematics:		<del>11-12</del>
<u>Mathematics</u>		<u>16-19</u>
MATH 220	Calculus	
or <u>MATH 221</u>	Calculus I	
<u>MATH 225</u>	Introductory Matrix Theory	
or <u>MATH 227</u>	Linear Algebra for Data Science	
or <u>MATH 257</u>	Linear Algebra with Computational Applications	
or <u>MATH 415</u>	Applied Linear Algebra	
MATH 231	Calculus II	
MATH 241	Calculus III	
Physics: 1		<del>10</del>

Code Title Hours MATH 285 Intro Differential Equations **Physics** 10 PHYS 211 University Physics: Mechanics **PHYS 212** University Physics: Elec & Mag PHYS 214 Univ Physics: Quantum Physics Technical Electives, including the following <del>14</del> **Technical Electives** 7-9 CHEM (300 or higher), BIOC, CHBE (200 or higher) Courses in life sciences (all courses at 200 or higher) Mathematics or computer science above the basic level Other courses in the physical and biological sciences and engineering including CHEM 199 7 Nontechnical Requirements 8 **Variable** General education: Foreign language - three semesters of college study (or three years of high school study) in a single foreign language Composition I **Advanced Composition 9** Humanities/Arts to satisfy the campus general education requirements Social/Behavioral sciences to satisfy the campus general education requirements Cultural Studies to satisfy the campus general education requirement 10 Free electives 11 30 Other courses in the physical and biological sciences and engineering including CHEM 199 (Three hours maximum credit in CHEM 199. Additional courses in sciences and engineering can be taken, upon consultation with the SCS advisor and approval from the chemistry department. Approved courses must generally have a strong technical prerequisite, such as one year of college-level math or science.) **Strongly Recommended: CHEM 499** Senior Thesis (maximum of 10 hours) Recommended: basic computer science Other technical courses chosen from: 14 Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher) 120 hours. **1**Hours given are those typical to meet requirement. **2** On and off-campus transfer students in the BS curriculum may substitute 1 additional hour of 200 level or higher Chemistry (including CHEM 297, CHEM 397, CHEM 496, CHEM 497, or CHEM 499) for CHEM 150. This may not include CHEM 222 or CHEM 223 for students who took the CHEM 102%7C, CHEM 103%7C, CHEM 104%7C and CHEM 105%7C sequence instead of CHEM 202, CHEM 203, CHEM 204, and CHEM 205. 3 If necessary, CHEM 102 and CHEM 103, CHEM 104 and CHEM 105, CHEM 222, and CHEM 223 may be substituted for CHEM 202, CHEM 203, CHEM 204, and CHEM 205. Warning: CHEM 222 and CHEM 223 are offered only in the fall semester. 4 The course chosen from CHEM 317, CHEM 437, or CHEM 447 cannot be used to satisfy the additional chemistry lab requirement. 5

Students who present less than 6 semester hours credit in a combination of CHEM 397, CHEM 497 and/or CHEM 499 for graduation must complete two additional courses chosen from the list. Students who will present at least 6 semester hours credit in a combination of CHEM 397, CHEM 497 and/or CHEM 499 for graduation are required to complete only one laboratory course from the list.

**6**Students contemplating transfer to the chemical engineering curriculum should choose MATH 415.**7**Three hours maximum credit in CHEM 199. Additional courses in the sciences and engineering can be taken upon the approval of the chair of the chemistry department advising committee. Most approved courses must have a strong technical prerequisite, such as one year of college-level math or science.

8

The requirements for the Campus General Education categories Natural Sciences and Technology and Quantitative Reasoning I and II are fulfilled through required coursework in the curriculum.

9

The courses taken to satisfy Advanced Composition requirement may also be used to partially satisfy one of the core chemistry, advanced chemistry, mathematics, physics, or technical electives requirements (if appropriate), or may be used to partially satisfy the free electives requirements.

<del>10</del>

The courses taken to satisfy Western and/or Non-Western Civilization requirements may also be used to satisfy nontechnical and/or free elective categories.

11

Restrictions: (1) Courses preparatory to or used to satisfy the minimum requirements specified in the above requirements may not be included as free electives. (2) No first-year foreign language course (e.g., 101, 102, or equivalent) may be included unless it is a different language than used to satisfy the foreign language nontechnical requirement.

Corresponding

BS Bachelor of Science

Degree

### **Program Features**

Academic Level Undergraduate

Does this major Yes

have transcripted concentrations?

Will you admit to No

the concentration

directly?

Is a concentration No required for

graduation?

What is the typical time to completion of this program?

4 years

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

120 hours

CIP Code 400501 - Chemistry, General.

Is This a Teacher Certification Program?

Yes

Will specialized accreditation be sought for this program?

No

### **Delivery Method**

This program is available:

On Campus - Students are required to be on campus, they may take some online courses.

## Admission Requirements

Desired Effective

Fall 2024

Admissions Term

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

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

N/A

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

No impact on enrollment and degrees awarded is expected.

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

What is the

Fall

matriculation term for this

program?

# Budget

Are there

No

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget

Information

There is no budget implication, other than perhaps a slight reduction in graduate TA usage relative to the situation in which CHEM 152 is required. However, because CHEM 152 was never offered as a required course, the actual budget implication is zero, relative to the situation before CHEM 152 was first proposed.

Attach File(s)

#### Financial Resources

How does the unit intend to financially support this proposal?

No impact on There is no financial resources is expected. impact.

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

No

Attach letters of support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

**Chemistry Differential** 

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

No

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

This will not affect faculty resources.

# Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

We shared and discussed this revision with Mary Schlembach, Chemistry Librarian. The library collections, resources and services are sufficient to support this proposal.

#### **EP** Documentation

**EP Control** 

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal No requires HLC inquiry

#### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook

BS:Chemistry -UIUC

Name

Program Code: 10KV0335BS

Minor Conc Degree BS Major Code Code Code Code

0335

Senate Approval

Date

Senate Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

**DOE** Approval

Date

Effective Date:

Attached

Document

Justification for

this request

Program Reviewer

Comments

**Brooke Newell (bsnewell) (10/09/23 12:27 pm):** Rollback: Email sent to Scott, Andrea and Stephen

Brooke Newell (bsnewell) (11/30/23 2:54 pm): Rollback: Email sent to Scott,

Andrea and Stephen

Brooke Newell (bsnewell) (12/12/23 1:53 pm): Rollback: Per conversation with

Scott, rolled back



Department of Mathematics, 273 Altgeld Hall 1409 W. Green St. (MC-382), Urbana, IL 60801

October 9, 2023

#### To whom it may concern:

The Department of Mathematics supports the Department of Chemistry proposal to revise the Chemistry, BS degree and its Environmental Chemistry concentration with regard to the Technical Electives for Required Mathematics.

The two current options in this regard are MATH 225 (Introductory Matrix Theory) and MATH 415 (Applied Linear Algebra). The proposal is to add MATH 227 (Linear Algebra for Data Science) and MATH 257 (Linear Algebra with Computational Applications) as two additional options. Because the number of Chemistry, BS majors who take MATH 415 is currently <10 students per semester, and likely not all of those students will move to take MATH 227 or 257 instead, the anticipated instructional impact on Math is low. Therefore, we are pleased to support this proposal, in the context that increasing numbers of Chemistry majors are interested in mathematics that includes a component relevant to computational applications, as is covered by MATH 227 and 257.

Sincerely,

Vera Hur

Professor and Chair, Mathematics

# Sample Sequence for Chemistry, BS

# http://catalog.illinois.edu/undergraduate/las/chemistry-bs/#degreerequirementstext

First Year						
First Semester Courses	Hours	Second Semester Courses	Hours			
LAS 101	1	CHEM 204 (Gen Ed: NST)	3			
CHEM 150	1	CHEM 205	2			
CHEM 202 (Gen Ed: NST)	3	MATH 231 (Gen Ed: QR I)	3			
CHEM 203	2	PHYS 211 (Gen Ed: NST & QR II)	4			
MATH 220 or MATH 221 (Gen Ed: QR I)	4-5 (use 4)	Composition I course - or, LOTE (3rd level)	3			
LOTE (3rd level) - or Composition I course	4					
semester sum	15	semester sum	15			
	Second	l Year				
First Semester Courses	Hours	Second Semester Courses	Hours			
CHEM 236	4	CHEM 436	3			
CHEM 237	2	Advanced Chemistry course (Lab)	3			
PHYS 212 (Gen Ed: NST & QR II)	4	PHYS 214 (Gen Ed: NST & QR II)	2			
MATH 241 (Gen Ed: QR II)	4	MATH 225 or MATH 227 or MATH 257 or MATH 415	2-4 (use 3)			
General Education course	3	MATH 285 (Gen Ed: QR II)	3			
		General Education course	3			
semester sum	17	semester sum	17			

Third Year						
First Semester Courses	Hours	Second Semester Courses	Hours			
CHEM 442	4	CHEM 444	4			
CHEM 420	2	CHEM 445	2			
CHEM 315	2	CHEM 312	3			
General Education courses	6	General Education courses	6			
semester sum	14	semester sum	15			
	Fourth	Year				
First Semester Courses	Hours	Second Semester Courses	Hours			
Advanced Chemistry course	3	Advanced Chemistry course	2.4/2)			
		(Lab)	2-4 (use 2)			
Advanced Chemistry course (Lab)	2-4 (use 3)	(Lab) Technical elective	2-4 (use 2)			
Advanced Chemistry course (Lab)  Technical electives	2-4 (use 3)					
		Technical elective	3			
Technical electives	5	Technical elective  General Education course	3			
Technical electives	5	Technical elective  General Education course	3			
Technical electives	5	Technical elective  General Education course	3			

minimum hours requirement listed on the degree's requirements page in the catalog.)

#### Chemistry, BS

# Green = Course or Text Addition Red = Course Removal

Yellow = Updated Text or credit hours
Orange = Order changed only

(Key: 272)

Current Requirements	Current Hours	Proposed Requirements	Proposed Hours
		Orientation and Professional	
		Development LAS 101	1
		or	1
		LAS 100 & LAS 101	3
		or	
		LAS 102	1
		Total Hours	1 or 3
		Major Core Requirements and Electives	
Core Chemistry <sup>1</sup>	37		37
Core Chemistry	37	Core Chemistry	37
		CHEM 150 (On- and off-campus transfer	
		students in the BS curriculum may substitute	
		1 additional hour of 200 level or higher	
		Chemistry [including CHEM 297, CHEM	
CHEM 150 <sup>2</sup>		397, CHEM 497, or CHEM 499] for CHEM 150. This may not include CHEM 222 or	
		CHEM 223 for students who took the	
		CHEM 102, CHEM 103, CHEM 104, and	
		CHEM 105 sequence instead of CHEM 202,	
		CHEM 203, CHEM 204, and CHEM 205.)	
CHEM 202		CHEM 202	
CHEM 203		CHEM 203	
CHEM 204		CHEM 204	
CHEM 205 <sup>3</sup>		CHEM 205	
		If necessary, CHEM 102, CHEM 103,	
		CHEM 104, CHEM 105, CHEM 222, and	
		CHEM 223 may be substituted for CHEM	
		202, CHEM 203, CHEM 204, and CHEM	
		205.	
CHEM 236		CHEM 236	
CHEM 237		CHEM 237	
CHEM 312		CHEM 312	
CHEM 315		CHEM 315	
CHEM 420		CHEM 420	
CHEM 436		CHEM 436	
CHEM 442		CHEM 442	
CHEM 444 CHEM 445		CHEM 444 CHEM 445	
CHEWI 443		CHEW 443	
Advanced Chemistry	11	Advanced Chemistry	11
Chemistry/Biochemistry courses		CHEM or BIOC courses numbered 300	-
numbered 300 or higher, which must include		or higher, which must include three	
one from the following:		laboratory courses from the following:	
CHEM 317		CHEM 317	
CHEM 437		CHEM 437	
CHEM 447 <sup>4</sup>		CHEM 447	
Additional laboratory		CHEM 483	
Additional laboratory work:		BIOC 455	
		A student who has earned at least 6 credit	
		hours in any combination of CHEM 397,	
BIOC 455		CHEM 497, or CHEM 499 must complete only two laboratory courses from the list, one	
		of which must be CHEM 317, CHEM 437,	
		or CHEM 447.	
CHEM 317			
CHEM 437			
CHEM 447			

CHEM 483 <sup>5</sup>		
Additional chemistry/biochemistry courses to complete the 11-hour requirement in advanced chemistry		
15.1	11.12	
Mathematics:	11-12	Mathematics
MATH 220 or MATH 221		MATH 220 or MATH 221  MATH 225 or MATH 227 or MATH 257
		or MATH 415
MATH 231		MATH 231
MATH 241		MATH 241
		MATH 285
Physics:1	10	Physics
PHYS 211		PHYS 211
PHYS 212		PHYS 212
PHYS 214		PHYS 214
Technical Electives, including the following:	14	Technical Electives
Required Mathematics:		
MATH 225 <sup>6</sup> or MATH 415		
MATH 285 or equivalent Strongly recommended:		
CHEM 499		
Recommended: basic computer science		
Other technical courses chosen from:	14	
Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher)		CHEM (300 or higher), BIOC, CHBE (200 or higher)
Courses in life sciences (all courses at		Courses in life sciences (all courses at
200 or higher)		200 or higher)
Mathematics or computer science above		Mathematics or computer science above
the basic level		the basic level
Other courses in the phsyical and biological sciences and engineering including CHEM 199 <sup>7</sup>		Other courses in the physical and biological sciences and engineering including CHEM 199 (Three hours maximum credit in CHEM 199. Additional courses in sciences and engineering can be taken, upon consultation with the SCS advisor and approval from the chemistry department. Approved courses must generally have a strong technical prerequisite, such as one year of collegelevel math or science.)
Nontechnical Requirements <sup>8</sup>	Variable	
General Education:		
Foreign-language-three semesters of		
college study (or three years of high school		
study) in a foreign language		
Composition I		
Advanced Composition <sup>9</sup>		
Humanities/Arts to satisfy the campus general education requirements		
Social/Behavioral sciences to satisfy the campus general education requirements		
Cultural Studies to satisy the campus		
general education requirement <sup>10</sup>		
Free electives <sup>11</sup>	30	

(added MATH 227 and 257 as options)

16-19

10

7-9

			ı
<sup>1</sup> Hours given are those typical to meet	-		
requirement. <sup>2</sup> On and off-campus transfer students in the BS curriculum may substitute 1 additional hour of 200 level or higher Chemistry (including CHEM 297, CHEM 397, CHEM 496, CHEM 497, or CHEM 499) for CHEM 150. This may not include CHEM 222 or CHEM 223 for students who took the CHEM 102, CHEM 103, CHEM 104 and CHEM 105 sequence instead of CHEM 202, CHEM 203, CHEM 204, and CHEM 205.			
<sup>3</sup> If necessary, CHEM 102 and CHEM 103, CHEM 104 and CHEM 105, CHEM 222, and CHEM 223 may be substituted for CHEM 202, CHEM 203, CHEM 204, and CHEM 205. Warning: CHEM 222 and CHEM 223 are offered only in the fall semester.			
<sup>4</sup> The course chosen from CHEM 317, CHEM 437, or CHEM 447 cannot be used to satisfy the additional chemistry lab requirement.			
<sup>5</sup> Students who present less than 6 semester hours credit in a combination of CHEM 397, CHEM 497 and/or CHEM 499 for graduation must complete two additional courses chosen from the list. Students who will present at least 6 semester hours credit in a combination of CHEM 397, CHEM 497 and/or CHEM 499 for graduation are required to complete only one laboratory course from the list.			
<sup>6</sup> Students contemplating transfer to the chemical engineering curriculum should choose MATH 415.			
<sup>7</sup> Three hours maximum credit in CHEM 199. Additional courses in the sciences and engineering can be taken upon the approval of the chair of the chemistry department advising committee. Most approved courses must have a strong technical prerequisite, such as one year of collegelevel math or science.			
8 The requirements for the Campus General Education categories Natural Sciences and Technology and Quantitative Reasoning I and II are fulfilled through required coursework in the curriculum.			
<sup>9</sup> The courses taken to satisfy Advanced Composition requirement may also be used to partially satisfy one of the core chemistry, advanced chemistry, mathematics, physics, or technical electives requirements (if appropriate), or may be used to partially satisfy the free electives requirements.			

<sup>10</sup> The courses taken to satisfy Western and/or Non-Western Civilization requirements may also be used to satisfy nontechnical and/or free elective categories.		
Restrictions: (1) Courses preparatory to or used to satisfy the minimum requirements specified in the above requirements may not be included as free electives. (2) No first-year foreign language course (e.g., 101, 102, or equivalent) may be included unless it is a different language than used to satisfy the foreign language nontechnical requirement.		

Date Submitted: 12/15/23 12:23 pm

Viewing: 10KV5023BS: Chemistry:

**Environmental Chemistry, BS** 

Last approved: 03/07/19 2:20 pm

Last edit: 01/12/24 9:32 am Changes proposed by: Scott Silverman

Chemistry: Environmental Chemistry, BS

Catalog Pages Using this Program

Proposal Type:

### In Workflow

- 1. U Program Review
- 2. 1413 Head
- 3. SOCS Head
- 4. KV Dean
- 5. University
  Librarian
- 6. COTE Programs
- 7. Provost
- 8. Senate EPC
- 9. Senate
- 10. U Senate Conf
- 11. Board of Trustees
- 12. IBHE
- 13. HLC
- 14. DMI

# Approval Path

- 1. 12/18/23 5:27 pm
   Donna Butler
   (dbutler):
   Approved for U
   Program Review
- 2. 12/18/23 5:53 pm Scott Silverman (sks): Approved for 1413 Head
- 3. 12/18/23 7:52 pm Paul Kenis (kenis): Approved for SOCS Head
- 4. 01/04/24 4:12 pm Stephen Downie (sdownie): Approved for KV Dean
- 5. 01/04/24 4:37 pm
  Claire Stewart
  (clairest):
  Approved for
  University
  Librarian

- 6. 01/04/24 8:32 pm
  Suzanne Lee
  (suzannel):
  Approved for
  COTE Programs
- 7. 01/11/24 9:30 am
  Brooke Newell
  (bsnewell):
  Approved for
  Provost

# History

1. Mar 7, 2019 by Deb Forgacs (dforgacs)

Concentration (ex. Dietetics)

This proposal is

for a:

Revision

### Administration Details

Official Program

Chemistry: Environmental Chemistry, BS

Name

Diploma Title

Sponsor College Liberal Arts & Sciences

Sponsor

Chemistry

Department

Sponsor Name <u>Scott K. Silverman</u>

Sponsor Email <u>sks@illinois.edu</u>

College Contact Stephen R. Downie College Contact

**Email** 

sdownie@illinois.edu

College Budget

Michael Wellens

Officer

College Budget

wellens@illinois.edu

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Scott K. Silverman, sks@illinois.edu

No

## Proposal Title

Effective Catalog

Fall 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Concentration in Environmental Chemistry in the Bachelor of Science in Chemistry in the College of Liberal Arts and Sciences

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This Chemistry: Environmental Chemistry, BS proposal (key 623) is related to the Chemistry, BSLAS proposal (key 271) and the Chemistry, BS proposal (key 272).

# **Program Justification**

Provide a brief description of what changes are being made to the program.

We are proposing ten changes. (1) Removing CHEM 496, which has been deactivated. This was a footnote as a substitution option for transfer students only. (2) Moving all footnotes up into the Program of Study degree requirements table. (3) Adding the college orientation course, e.g., LAS 101. (4) In the POS table, combining the Technical Electives and Other technical courses sections, and moving MATH courses from Technical Electives to the Mathematics section. (5) Removing the formal Free Electives requirement, which served no purpose in that the students are already taking all such courses simply to reach the 120 hours degree requirement. (6) Adding the major requirements as part of the campuswide concentration transparency project. (7) Adding several addition advanced course options into the required Technical Elective Courses list for this concentration. (8) Removing IB 485 from the list of Technical Elective Courses for the concentration because this course was deactivated. (9) Clarifying that the Technical Elective Courses for the concentration can be used to satisfy the Technical Electives.

Total credit hours will not change.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

Why are these changes necessary?

- 1. Removal of CHEM 496 because the course has been deactivated. This was a footnote as a substitution option for transfer students only.
- 2. Due to new guidance from campus for student transparency and clarity, footnotes are integrated into the POS.
- 3. The required college orientation course is added into the POS.
- 4. In the POS table, we are combining Technical Electives and Other technical courses into one category, because these were not actually separate requirements, which led to confusion. Also we are moving all MATH courses into a single Mathematics category, rather than split between two categories. The POS now more clearly, and without any overlap between categories, lists the requirements for each category of course work: Core Chemistry, Advanced Chemistry, Mathematics, Physics, and Technical Electives. The underlying requirements and number of hours (both for each category and in total) are not changed.

Explanation of why the Technical Electives requirement is listed as "7-9 hours": The existing Technical Electives requirement is 14 hours, but this includes one of MATH 225 (2 hours) or MATH 415 (3 or 4 hours) as well as MATH 285 (3 hours). Therefore, the actual existing Technical Electives requirement, after subtracting the two MATH courses, is 7-9 hours. We are maintaining this Technical Electives requirement, now that Mathematics is listed as a separate category.

- 5. We are removing the formal Free Electives requirement, which served no purpose in that the students are already taking all such courses simply to reach the 120 hours degree requirement.
- 6. Adding the major requirements as part of the campuswide concentration transparency project.
- 7. The existing listing of required Technical Elective Courses for the Environmental Chemistry Concentration does not include several courses in other units that currently are routinely approved on a case-by-case basis when students inquire. It will be simpler for everyone, especially students, if these courses are present as approved directly within the listing.
- 8. Removing IB 485 from the list of Technical Elective Courses for the concentration because this course was deactivated.
- 9. In the Technical Elective Courses for the concentration, we now state, "These courses can contribute, in whole or in part, to the required 7-9 hours of technical electives for the Specialized Curriculum in Chemistry." This states explicitly what has always been the practice, which is that the technical electives taken to satisfy the concentration can be used to satisfy the major itself.
- 10. We are updating the MATH course options for the Technical Electives to include two additional options, MATH 227 and MATH 257, each of which has a valuable

computational component. The detailed justification follows.

At present, the Chemistry, BS program currently allows the linear algebra requirement to be satisfied by taking either MATH 225 (Introductory Matrix Theory) or MATH 415 (Applied Linear Algebra). We are proposing to add both MATH 227 (Linear Algebra for Data Science) and MATH 257 (Linear Algebra with Computational Applications) to the options satisfying the linear algebra requirements. With this proposal, the options will include that any of MATH 225, MATH 227, MATH 257, or MATH 415 can be used by Chemistry, BS majors to satisfy the linear algebra requirement.

MATH 227 and MATH 257 serve similar purposes as MATH 225 and MATH 415 in that they are introductory linear algebra linear algebra courses. From the perspective of the Chemistry, BS major, linear algebra is necessary to prepare students for CHEM 442 and CHEM 444, Physical Chemistry I and II, which require students to have a preexisting knowledge of matrices, vectors, matrix-matrix and matrix vector multiplication, determinants, dot products, orthonormalization, and diagonalization. All four MATH courses teach all of these subjects and are thus well-suited to satisfying the Chemistry, BS major requirements.

There are additional merits to including MATH 227 and MATH 257, which provide potential future advantages compared to the existing MATH 225 and MATH 415 options. First, MATH 227 and MATH 257 include computational components that MATH 225 lacks. These computational components allow students to develop practical programming skills for applying linear algebra to real science and engineering problems of relevant to modern society. Second, both MATH 227 and MATH 257 are lower-level course listings (200-level) than MATH 415, which is a course targeted primarily to Math or CS majors. In the modern era, data science and machine learning dominate the news headlines, and we believe that allowing Chemistry majors to fulfill the linear algebra requirement with MATH 227 or MATH 257 is critical to aligning the undergraduate Chemistry curriculum with modern standards in which computing and data analysis are essential. This direction is also tightly aligned with broader campus efforts to develop CS+X and DS+X degree programs, which use MATH 227 and MATH 257 as their baseline linear algebra courses. Third, adding this flexibility to the linear algebra requirement will future-proof the Chemistry major to modifications in the linear algebra courses offered on campus, while still allowing classes to transfer as courses that work for the Chemistry degree so that our transfer students can graduate in a reasonable amount of time.

Environmental Chemistry concentration 40 hours upper division sample plan:

### Required courses:

CHEM 312 - 3 hours

CHEM 315 - 2 hours

CHEM 420 - 2 hours

CHEM 436 - 3 hours

CHEM 442 - 4 hours

CHEM 444 - 4 hours

CHEM 445 - 2 hours

sum: 20 hours

11 hours Advanced Chemistry - all options are 300 or 400 level

The above add up to 31 hours, so at least 9 more qualifying hours are needed, likely coming from some combination of the following:

CHEM 236 - 4 hours (prerequisites: CHEM 104 or 204 or 222/223, all of which require CHEM 102)

CHEM 237 - 2 hours (prerequisites: credit or concurrent registration in CHEM 236, which requires CHEM 104 or 204 or 222/223, all of which require CHEM 102)

MATH 241 - 4 hours (prerequisites: MATH 220/221 and 231)

MATH 257 - 3 hours (prerequisites: CS 101 and MATH 220/221)

MATH 285 - 3 hours (prerequisites: MATH 241, which requires MATH 220/221 and 231)

MATH 415 - 3 hours (prerequisites: MATH 241, which requires MATH 220/221 and 231)

PHYS 212 - 4 hours (prerequisites: PHYS 211 and credit or concurrent enrollment in

MATH 241, which requires MATH 220/221 and 231)

PHYS 214 - 2 hours (prerequisites: PHYS 211 and 212)

(Degree requirements for Environmental Chemistry concentration: Students will take a 3-hour, 300 level basic course in environmental chemistry and three 3-hour, upper-level advanced technical courses in environmental areas. These courses can be used as part of the required 7-9 hours of technical electives for the Specialized Curriculum in Chemistry.)

Required Technical Elective Courses for the Environmental Chemistry Concentration Basic courses - 3 hours

CHEM 360 Chemistry of the Environment - 3 hours

or CEE 330 Environmental Engineering - 3 hours

Advanced Courses: Select three courses from the following: - 9 hours

ATMS 420 Atmospheric Chemistry - 4 hours

ATMS 449 - Biogeochemical Cycles - 4 hours

CEE 443 - Env Eng Principles, Chemical - 4 hours

CHEM 397 Individual Study Junior - 1-3 hours

CHEM 460 Green Chemistry - 3 or 4 hours

CHEM 497 Individual Study Senior - 1-3 hours

CHEM 499 Senior Thesis - 2-6 hours

GEOL 380 Environmental Geology - 4 hours

GEOL 460 Geochemistry - 4 hours

NRES 351 Introduction to Environmental Chemistry - 3 hours

NRES 487 Soil Chemistry - 3 hours

NRES 490 Surface Water System Chemistry - 4 hours

Other 400 level courses dealing with economic, engineering, biological aspects of environmental chemistry upon consultation with the faculty advisor.

Total equals 40 hours

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 this new program/proposed change result in the replacement of another program?

No

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

Yes

Courses outside

of the sponsoring

department/interdisciplinary

departments

ATMS 420 - Atmospheric Chemistry

ATMS 449 - Biogeochemical Cycles

GEOL 460 - Geochemistry

NRES 351 - Introduction to Environmental Chemistry

NRES 487 - Soil Chemistry

NRES 490 - Surface Water System Chemistry

MATH 227 - Linear Algebra for Data Sci

MATH 257 - Linear Algebra w Computat Appl

Please attach any <u>supporting letter NRES.pdf</u>
letters of <u>supporting letter ESEC.pdf</u>
support/acknowledgesupporting letter ATMS.pdf
for any <u>supporting letter MATH.pdf</u>

Instructional

Resources

consider faculty,

students, and/or

other impacted

units as

appropriate.

# Program Regulation and Assessment

# Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

<u>Unchanged from the Learning Outcomes listed at http://catalog.illinois.edu</u>/undergraduate/las/chemistry-bs/#learningoutcomestext

Students graduating with the BS in Chemistry will have:

- 1. A thorough knowledge of the basic principles of chemistry, including atomic and molecular structure, chemical dynamics and the chemical and physical properties of substances.
- 2. An exposure to the subfields of chemistry, such as analytical, organic, physical, materials, inorganic, as well as chemical biology.
- 3. The ability to read, evaluate, interpret, and present (via oral and written communication) numerical, chemical and general scientific data, information and literature.
- <u>4.</u> The ability to carry out experiments, use appropriate experimental apparatus effectively, and demonstrate proper laboratory safety skills. migration

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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

# 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/PublicAdminRules2017.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.

Revised programs <u>Comparative Table Env Chemistry,</u>

BS\_SKS01.xlsx

### SS Environmental Chemistry

### BS SKS04.docx

Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

Statement for

Programs of

**General education:** Students must complete the Campus General

Study Catalog

Education requirements including the campus general education language requirement.

<u>Minimum hours required for graduation:</u> 120 hours, to include a minimum of 40 hours of upperdivision coursework generally at the 300 and 400 level. These hours can be drawn from all elements of the degree.

Course List

Code Title Hours

Orientation and Professional Development

<u>LAS 101</u> <u>Design Your First Year Experience</u> <u>1</u>

<u>OR</u>

LAS 100 Success in LAS for International Students3

<u>& LAS 101</u> and Design Your First Year Experience

OR

LAS 102 Transfer Advantage

Total Hours 1 or 3

Course List

1

Code Title Hours

Major Core Requirements and Electives

Core Chemistry 37

CHEM 150 First Semester Success in Chemistry (On- and off-campus transfer students in the BS

curriculum may substitute 1 additional hour of 200 level or higher Chemistry

(including CHEM 297, CHEM 397, CHEM 497, or CHEM 499) for CHEM 150. This may not include CHEM 222 or CHEM 223 for students who took the CHEM 102, CHEM 103,

CHEM 104, and CHEM 105 sequence instead of CHEM 202, CHEM 203, CHEM 204,

and CHEM 205.)

CHEM 202 Accelerated Chemistry I

CHEM 203 Accelerated Chemistry Lab I

CHEM 204 Accelerated Chemistry II

CHEM 205 Accelerated Chemistry Lab II

If necessary, CHEM 102, CHEM 103, CHEM 104, CHEM 105, CHEM 222, and CHEM 223 may be substituted for CHEM 202, CHEM 203, CHEM 204, and CHEM 205.

CHEM 236 Fundamental Organic Chem I

CHEM 237 Structure and Synthesis

CHEM 312 Inorganic Chemistry

CHEM 315 Instrumental Chem Systems Lab

<u>CHEM 420</u> <u>Instrumental Characterization</u>

CHEM 436 Fundamental Organic Chem II

Code	Title	Hours
CHEM 442	Physical Chemistry I	
CHEM 444	Physical Chemistry II	
CHEM 445	Physical Principles Lab I	
Advanced Che	<u>mistry</u>	<u>11</u>
CHEM or BI	OC courses numbered 300 or higher, which must include three laboratory courses from	<u> </u>
the following	<u>g:</u>	
CHEM 317	<u>Inorganic Chemistry Lab</u>	
CHEM 437	Organic Chemistry Lab	
CHEM 447	Physical Principles Lab II	
CHEM 483	Solid State Structural Anlys	
BIOC 455	Technqs Biochem & Biotech	
<u>A student w</u>	tho has earned at least 6 credit hours in any combination of CHEM 397, CHEM 497, or	
CHEM 499	must complete only two laboratory courses from the list, one of which must be	
<u>CHEM 317,</u>	<u>CHEM 437, or CHEM 447.</u>	
<u>Mathematics</u>		<u>16-19</u>
MATH 220	<u>Calculus</u>	
or MATH 22	1Calculus I	
MATH 225	Introductory Matrix Theory	
or MATH 22	7Linear Algebra for Data Science	
or MATH 25	7Linear Algebra with Computational Applications	
or MATH 41	5Applied Linear Algebra	
MATH 231	<u>Calculus II</u>	
MATH 241	<u>Calculus III</u>	
MATH 285	Intro Differential Equations	
<u>Physics</u>		<u>10</u>
PHYS 211	<u>University Physics: Mechanics</u>	
PHYS 212	<u>University Physics: Elec &amp; Mag</u>	
PHYS 214	<u>Univ Physics: Quantum Physics</u>	
Technical Elect	<u>tives</u>	<u>7-9</u>
CHEM (300	or higher), BIOC, CHBE (200 or higher)	
Courses in	ife sciences (all courses at 200 or higher)	
<u>Mathematic</u>	s or computer science above the basic level	
Other cours	ses in the physical and biological sciences and engineering including CHEM 199 (Three	
<u>hours maxi</u>	mum credit in CHEM 199. Additional courses in sciences and engineering can be taken,	:
upon consu	ltation with the SCS advisor and approval from the chemistry department. Approved	
courses mu	st generally have a strong technical prerequisite, such as one year of college-level	
math or sci	ence.)	
	Course List	
Code	Title	Hours
Required Tech	nical Elective Courses for the Environmental Chemistry Concentration	<u>12</u>
These cours	ses can contribute, in whole or in part, to the required 7-9 hours of technical electives	
for the Spe	cialized Curriculum in Chemistry.	
Basic Courses		
<u>CHEM 360</u>	Chemistry of the Environment	<u>3</u>
or CEE 330	Environmental Engineering	
Advanced Cou	<u>rses</u>	<u>9</u>
Select three	e courses from the following:	

Codo	Tible	Harrina
Code	Title	Hours
ATMS 420	Atmospheric Chemistry	
<u>ATMS 449</u>	<u>Biogeochemical Cycles</u>	
<u>CEE 443</u>	Env Eng Principles, Chemical	
<u>CHEM 397</u>	Individual Study Junior	
<u>CHEM 460</u>	Green Chemistry	
<u>CHEM 497</u>	Individual Study Senior	
CHEM 499	Senior Thesis	
GEOL 380	Environmental Geology	
GEOL 460	Geochemistry	
NRES 351	Introduction to Environmental Chemistry	
NRES 487	Soil Chemistry	
NRES 490	Surface Water System Chemistry	
Other 400 level courses	dealing with economic, engineering, or biological aspects of environment	<u>al</u>
chemistry, upon consult	ation with the SCS advisor and approval of the chemistry department.	
	Course List	
Code	<del>Title</del>	Hours
Required Technical Elective	- Courses for the Environmental Chemistry Concentration	
Basic Courses		
CHEM 360	Chemistry of the Environment	<del>3</del>
or CEE 330	Environmental Engineering	
Advanced Courses: Select	three courses from the following:	9
CHEM 460	Green Chemistry	
CEE 443	Env Eng Principles, Chemical	
GEOL 380	Environmental Geology	
<del>IB 485</del>	Course IB 485 Not Found	
CHEM 397	Individual Study Junior	

**Individual Study Senior** 

Other 400-level courses dealing with economic, engineering, biological aspects of environmental

**Senior Thesis** 

# Program Relationships

Corresponding

**CHEM 497** 

**CHEM 499** 

Program(s):

Corresponding Program(s)

Chemistry, BS

# **Program Features**

Academic Level Undergraduate

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

chemistry upon consultation with the faculty advisor.

No

Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)

# **Delivery Method**

This program is

available:

On Campus - Students are required to be on campus, they may take some online courses.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

No impact on enrollment and degrees awarded is expected.

# Budget

Are there

No

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget

Information

Attach File(s)

### Financial Resources

How does the unit intend to financially support this proposal?

No impact on financial resources is expected. migration

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

No

Attach letters of support

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

This will not affect faculty resources.

# Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

We shared and discussed this revision with Mary Schlembach, Chemistry Librarian. The library collections, resources and services are sufficient to support this proposal.

### **EP** Documentation

EP Control

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

No

requires HLC

inquiry

### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook

BS: Chemistry: Env Chem -UIUC

Name

Program Code: 10KV5023BS

Minor Conc 5023 Degree BS Major Code Code Code Code

0335

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

DOE Approval

Date

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer Comments Brooke Newell (bsnewell) (10/09/23 12:32 pm): Rollback: Email sent to Scott Brooke Newell (bsnewell) (11/30/23 2:54 pm): Rollback: Email sent to Scott, Andrea and Stephen

**Brooke Newell (bsnewell) (12/12/23 1:56 pm):** Rollback: Per conversation with Scott

Key: 623



Scott K. Silverman Professor of Chemistry and Associate Head of Budget and Operations Department of Chemistry, University of Illinois

19 September 2023

Dear Dr. Silverman,

The Department of Natural Resources and Environmental Sciences supports the addition of three of our courses to the technical elective courses for the requirements of the Environmental Chemistry concentration within the Chemistry degree. Those courses to be added are NRES 351-Introduction to Environmental Chemistry, NRES 487-Soil Chemistry, and NRES 490-Surface Water Chemistry.

Thank you for reaching out about adding NRES courses to your list of electives. The expected additional students should not have any negative impacts on the courses. Please let me know if I can of any further help.

Best regards,

Robert L. Schooley Professor and Head

Roboto lee Schooling

# UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

### **College of Liberal Arts & Sciences**

Department of Earth Science & Environmental Change 3081 Natural History Building, MC-102 1301 W. Green St. Urbana, IL 61801

Sept 14, 2023

**Prof Scott Silverman** 

Associate Head, Dept of Chemistry

Dear Scott,

We are happy for you to include GEOL 460 (Geochemistry) within the Environmental Chemistry specialized curriculum within the chemistry major. We anticipate the instructional impact on ESEC will be minimal, and we welcome your majors into this class as well as these students into GEOL 380 (already listed for this major).

Sincerely,

**Craig Lundstrom** 

lath

Head, Department of Earth Science & Environmental Change



### **COLLEGE OF LIBERAL ARTS AND SCIENCES**

Department of Atmospheric Sciences 3074 Natural History Building, MC-104 1301 West Green Street Urbana, IL 61801

September 14, 2023

To whom it may concern—

This letter is in regard to the proposed modification of the Environmental Chemistry, BS degree list of approved elective courses by the Department of Chemistry.

The proposal seeks to add two of the Department of Atmospheric Science's regularly-offered elective courses, ATMS 420 Atmospheric Chemistry, and ATMS 449 Biogeochemical Cycles to the aforementioned list of courses.

This modification will have minimal instructional impact on our Department's offering of these two courses, and thus the Department of Atmospheric Sciences fully supports this proposal.

With best regards,

Stephen W. Nesbitt Professor and Head

Etin h m



Department of Mathematics, 273 Altgeld Hall 1409 W. Green St. (MC-382), Urbana, IL 60801

October 9, 2023

### To whom it may concern:

The Department of Mathematics supports the Department of Chemistry proposal to revise the Chemistry, BS degree and its Environmental Chemistry concentration with regard to the Technical Electives for Required Mathematics.

The two current options in this regard are MATH 225 (Introductory Matrix Theory) and MATH 415 (Applied Linear Algebra). The proposal is to add MATH 227 (Linear Algebra for Data Science) and MATH 257 (Linear Algebra with Computational Applications) as two additional options. Because the number of Chemistry, BS majors who take MATH 415 is currently <10 students per semester, and likely not all of those students will move to take MATH 227 or 257 instead, the anticipated instructional impact on Math is low. Therefore, we are pleased to support this proposal, in the context that increasing numbers of Chemistry majors are interested in mathematics that includes a component relevant to computational applications, as is covered by MATH 227 and 257.

Sincerely,

Vera Hur

Professor and Chair, Mathematics

# Sample Sequence for Chemistry: Environmental Chemistry, BS

# http://catalog.illinois.edu/undergraduate/las/chemistry-bs/environmental-chemistry/#degreerequirementstext

First Year					
First Semester Courses	Hours	Second Semester Courses	Hours		
LAS 101	1	CHEM 204 (Gen Ed: NST)	3		
CHEM 150	1	CHEM 205	2		
CHEM 202 (Gen Ed: NST)	3	MATH 231 (Gen Ed: QR I)	3		
CHEM 203	2	PHYS 211 (Gen Ed: NST & QR II)	4		
MATH 220 or MATH 221 (Gen Ed: QR I)	4-5 (use 4)	Composition I course - or, LOTE (3rd level)	3		
LOTE (3rd level) - or, Composition I course	4				
semester sum	15	semester sum	15		
	Second Year				
First Semester Courses	Hours	Second Semester Courses	Hours		
CHEM 236	4	CHEM 436	3		
CHEM 237	2	Advanced Chemistry course (Lab)	3		
PHYS 212 (Gen Ed: NST & QR II)	4	PHYS 214 (Gen Ed: NST & QR II)	2		
MATH 241 (Gen Ed: QR II)	4	MATH 225 or MATH 227 or MATH 257 or MATH 415	2-4 (use 3)		
General Education course	3	MATH 285 (Gen Ed: QR II)	3		
		General Education course	3		
semester sum	17	semester sum	17		

Third Year					
First Semester Courses	Hours	Second Semester Courses	Hours		
CHEM 442	4	CHEM 444	4		
CHEM 420	2	CHEM 445	2		
CHEM 315	2	CHEM 312	3		
General Education courses	6	CHEM 360 or CEE 330 (Environmental technical elective)	3		
		General Education course	3		
semester sum	14	semester sum	15		
Fourth Year					
First Semester Courses	Hours	Second Semester Courses	Hours		
Advanced Chemistry course	3	Advanced Chemistry course (Lab)	2-4 (use 2)		
Advanced Chemistry course (Lab)	2-4 (use 3)	Environmental technical electives	6		
Environmental technical elective	3	General Education course	3		
General Education courses	6	Free elective course	1		
semester sum	15	semester sum	12		

minimum hours requirement listed on the degree's requirements page in the catalog.)

# Chemistry: Environmental Chemistry, BS

Green = Course or Text Addition

Red = Course Removal

Yellow = Updated Text or credit hours

(Key: 623)

Current Requirements	Current Hours	Proposed Requirements	Proposed Hours
	+ +	Orientation and Professional	
		Development	
		LAS 101	1
	+	or	
		LAS 100 & LAS 101	3
		or LAS 102	1
	+	Total Hours	1 or 3
Core Chemistry	37	Major Core Requirements and Electives  Core Chemistry	37
core chemistry	37	·	31
		CHEM 150 (On- and off-campus transfer students in the BS curriculum may substitute 1 additional hour of 200 level or higher Chemistry [including CHEM 297,	
CHEM 150		CHEM 397, CHEM 497, or CHEM 499] for CHEM 150. This may not include CHEM 222 or CHEM 223 for students	
		who took the CHEM 102, CHEM 103, CHEM 104, and CHEM 105 sequence instead of CHEM 202, CHEM 203, CHEM 204, and CHEM 205.)	
CHEM 202	+	CHEM 202	
CHEM 202 CHEM 203		CHEM 202 CHEM 203	
CHEM 203 CHEM 204	+	CHEM 203 CHEM 204	
CHEM 205 <sup>3</sup>	+	CHEM 205	
		If necessary, CHEM 102, CHEM 103, CHEM 104, CHEM 105, CHEM 222, and CHEM 223 may be substituted for CHEM 202, CHEM 203, CHEM 204, and CHEM 205.	
CHEM 236		CHEM 236	
CHEM 237		CHEM 237	
CHEM 312		CHEM 312	
CHEM 315		CHEM 315	
CHEM 420		CHEM 420	
CHEM 436 CHEM 442		CHEM 436 CHEM 442	
CHEM 444	_	CHEM 444	
CHEM 445		CHEM 445	
Advanced Chemistry	11	Advanced Chemistry	11
Chemistry/Biochemistry courses		CHEM or BIOC courses numbered 300	
numbered 300 or higher, which must		or higher, which must include three	
include one from the following:	+	laboratory courses from the following:	
CHEM 317 CHEM 437		CHEM 317 CHEM 437	
CHEM 447	+	CHEM 447	
Januara 117	+ -	CHEM 483	
Additional laboratory work:		BIOC 455	
BIOC 455		A student who has earned at least 6 credit hours in any combination of CHEM 397, CHEM 497, or CHEM 499 must complete only two laboratory courses from the list, one of which must be CHEM 317, CHEM 437, or CHEM 447.	
CHEM 317			
CHEM 437			
CHEM 447			

MATH 220 or MATH 221  MATH 231  MATH 241  Physics: PHYS 211 PHYS 212 PHYS 214  Technical Electives, including the following: Required Mathematics: MATH 225 or MATH 415 MATH 285 or equivalent Strongly recommended: CHEM 499  Recommended: basic computer science  Other technical courses chosen from: Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher) Courses in life sciences (all courses at	10 14	Mathematics  MATH 220 or MATH 221  MATH 225 or MATH 227 or MATH 257 or MATH 415  MATH 231  MATH 241  MATH 285  Physics  PHYS 211  PHYS 212  PHYS 214  Technical Electives  CHEM (300 or higher), BIOC, CHBE (200 or higher)	10 7-9
Mathematics: 1 MATH 220 or MATH 221  MATH 231 MATH 241  Physics: PHYS 211 PHYS 212 PHYS 214  Technical Electives, including the following: Required Mathematics: MATH 225 or MATH 415 MATH 285 or equivalent Strongly recommended: CHEM 499  Recommended: basic computer science  Other technical courses chosen from: Chemistry (300 or higher), piochemistry, chemical engineering (200 or higher) Courses in life sciences (all courses at 200 or higher)	10	MATH 220 or MATH 221  MATH 225 or MATH 227 or MATH 257 or MATH 415  MATH 231  MATH 241  MATH 285  Physics PHYS 211 PHYS 212 PHYS 214  Technical Electives  CHEM (300 or higher), BIOC, CHBE	10
Mathematics:  MATH 220 or MATH 221  MATH 231  MATH 241  Physics: PHYS 211 PHYS 212 PHYS 214  Technical Electives, including the following: Required Mathematics: MATH 225 or MATH 415  MATH 285 or equivalent Strongly recommended: CHEM 499  Recommended: basic computer science  Other technical courses chosen from: Chemistry (300 or higher), piochemistry, chemical engineering (200 or higher) Courses in life sciences (all courses at 200 or higher)	10	MATH 220 or MATH 221  MATH 225 or MATH 227 or MATH 257 or MATH 415  MATH 231  MATH 241  MATH 285  Physics PHYS 211 PHYS 212 PHYS 214  Technical Electives  CHEM (300 or higher), BIOC, CHBE	10
MATH 220 or MATH 221  MATH 231  MATH 241  Physics: PHYS 211 PHYS 212 PHYS 214  Fechnical Electives, including the following: Required Mathematics: MATH 225 or MATH 415 MATH 285 or equivalent Strongly recommended: CHEM 499  Recommended: basic computer science  Other technical courses chosen from: Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher) Courses in life sciences (all courses at 200 or higher)	10	MATH 220 or MATH 221  MATH 225 or MATH 227 or MATH 257 or MATH 415  MATH 231  MATH 241  MATH 285  Physics PHYS 211 PHYS 212 PHYS 214  Technical Electives  CHEM (300 or higher), BIOC, CHBE	10
MATH 220 or MATH 221  MATH 231  MATH 241  Physics: PHYS 211 PHYS 212 PHYS 214  Technical Electives, including the following: Required Mathematics: MATH 225 or MATH 415  MATH 285 or equivalent Strongly recommended: CHEM 499  Recommended: basic computer science  Other technical courses chosen from: Chemistry (300 or higher), biochemistry, chemical engineering (200 or nigher) Courses in life sciences (all courses at 200 or higher)	10	MATH 220 or MATH 221  MATH 225 or MATH 227 or MATH 257 or MATH 415  MATH 231  MATH 241  MATH 285  Physics PHYS 211 PHYS 212 PHYS 214  Technical Electives  CHEM (300 or higher), BIOC, CHBE	10
Physics: PHYS 211 PHYS 212 PHYS 214  Technical Electives, including the following: Required Mathematics: MATH 225 or MATH 415 MATH 285 or equivalent Strongly recommended: CHEM 499  Recommended: basic computer science  Other technical courses chosen from: Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher) Courses in life sciences (all courses at 200 or higher)	14	257 or MATH 415  MATH 231  MATH 241  MATH 285  Physics PHYS 211 PHYS 212 PHYS 214  Technical Electives  CHEM (300 or higher), BIOC, CHBE	
Physics: PHYS 211 PHYS 212 PHYS 214  Technical Electives, including the following: Required Mathematics: MATH 225 or MATH 415 MATH 285 or equivalent Strongly recommended: CHEM 499  Recommended: basic computer science  Other technical courses chosen from: Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher) Courses in life sciences (all courses at 200 or higher)	14	MATH 231 MATH 241 MATH 285  Physics PHYS 211 PHYS 212 PHYS 214  Technical Electives  CHEM (300 or higher), BIOC, CHBE	
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PHYS 214  Technical Electives, including the following:  Required Mathematics:  MATH 225 or MATH 415  MATH 285 or equivalent  Strongly recommended:  CHEM 499  Recommended: basic computer science  Other technical courses chosen from:  Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher)  Courses in life sciences (all courses at 200 or higher)		PHYS 214  Technical Electives  CHEM (300 or higher), BIOC, CHBE	7-9
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Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher)  Courses in life sciences (all courses at 200 or higher)	14		
biochemistry, chemical engineering (200 or higher)  Courses in life sciences (all courses at 200 or higher)			
biochemistry, chemical engineering (200 or higher)  Courses in life sciences (all courses at 200 or higher)	_		
higher)  Courses in life sciences (all courses at 200 or higher)		(200 or higher)	
200 or higher)			
<b>G</b> ,		Courses in life sciences (all courses at	
Mathematics or computer science above	_	200 or higher)	
1		Mathematics or computer science above	
the basic level		the basic level	
	_		
	_	Other courses in the physical and biological sciences and engineering	
	_	including CHEM 199 (Three hours	
	_	maximum credit in CHEM 199. Additional	
Other courses in the phsyical and	_	courses in sciences and engineering can be	
biological sciences and engineering	_	taken, upon consultation with the SCS	
including CHEM 199	_	advisor and approval from the chemistry	
	_	department. Approved courses must	
	_	generally have a strong technical	
	_	prerequisite, such as one year of college-	
	_	level math or science.)	
	_		
Nontechnical Requirements Va	ariable		
General Education:	ariaore		
Foreign-language-three semesters of			
college study (or three years of high school			
study) in a foreign language			
Composition I			
Advanced Composition			
Humanities/Arts to satisfy the campus			
general education requirements			
Social/Behavioral sciences to satisfy the			
campus general education requirements			
* *			
Cultural Studies to satisfy the campus			
general education requirement			
Free electives	30		
D 1 1 1 1 1 1 1 2 2 2 2		D 1 1 1 1 1 2 2 2	
Required Technical Elective Courses for		Required Technical Elective Courses for	
the Environmental Chemistry Concentration		the Environmental Chemistry Concentration	

Mathematics MATH 220 or MATH 221	16-19
MATH 225 or MATH 227 or MATH	
257 or MATH 415	
MATH 231	
MATH 241 MATH 285	
WIXIII 203	
Physics	10
PHYS 211 PHYS 212	
PHYS 214	
Technical Electives	7-9
CHEM (300 or higher), BIOC, CHBE	
(200 or higher)	
Courses in life sciences (all courses at	
200 or higher)	
Mathematics or computer science above the basic level	
Other courses in the physical and biological sciences and engineering	
including CHEM 199 (Three hours	
maximum credit in CHEM 199. Additional	
courses in sciences and engineering can be taken, upon consultation with the SCS	
advisor and approval from the chemistry	
department. Approved courses must	
department. Approved courses must generally have a strong technical	
department. Approved courses must	
department. Approved courses must generally have a strong technical prerequisite, such as one year of college-	
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department. Approved courses must generally have a strong technical prerequisite, such as one year of college-	

(added MATH 227 and 257 as options)

Basic Courses	
CHEM 360 or CEE 330	3
Advanced Courses: Select three courses	9
from the following:	,
CHEM 460	
CEE 443	
CEOL 200	
GEOL 380	
IB 485	
CHEM 397	
CHEM 497	
CHEM 499	
Odless 400 lessel accessed to 1' or a 'd	
Other 400-level courses dealing with	
economic, engineering, biological aspects of environmnetal chemistry upon	
of environmetal chemistry upon	

consultation with the faculty advisor.

technical electives for the Specialized	
Curriculum in Chemistry.	
Basic Courses	
CHEM 360 or CEE 330	3
Advanced Courses	9
Select three courses from the following:	
ATMS 420	
ATMS 449	
CEE 443	
CHEM 397	
CHEM 460	
CHEM 497	
CHEM 499	
GEOL 380	
GEOL 460	
NRES 351	
NRES 487	
NRES 490	
Other 400-level courses dealing with economic, engineering, or biological aspects of environmental chemistry, upon consultation with the SCS advisor and approval of the chemistry department.	

Date Submitted: 12/15/23 12:22 pm

Viewing: 10KV0335BSLA: Chemistry,

# **BSLAS**

Last approved: 02/11/21 7:37 am

Last edit: 01/12/24 9:33 am Changes proposed by: Scott Silverman

Chemistry, BSLAS

Catalog Pages

Using this Program Chemistry: Chemistry Teaching, BSLAS

### Proposal Type:

### In Workflow

- 1. U Program Review
- 2. 1413 Head
- 3. SOCS Head
- 4. KV Dean
- 5. University
  Librarian
- 6. COTE Programs
- 7. Provost

### 8. Senate EPC

- 9. Senate
- 10. U Senate Conf
- 11. Board of Trustees
- 12. IBHE
- 13. HLC
- 14. DMI

# Approval Path

- 1. 12/18/23 5:27 pm Donna Butler (dbutler): Approved for U Program Review
- 2. 12/18/23 5:53 pm Scott Silverman (sks): Approved for 1413 Head
- 3. 12/18/23 7:53 pm Paul Kenis (kenis): Approved for SOCS Head
- 4. 01/04/24 4:12 pm Stephen Downie (sdownie): Approved for KV Dean
- 5. 01/04/24 4:39 pm Claire Stewart (clairest): Approved for University Librarian

6. 01/04/24 8:32 pm Suzanne Lee (suzannel): Approved for COTE Programs

7. 01/11/24 9:30 am
Brooke Newell
(bsnewell):
Approved for
Provost

# History

1. Mar 21, 2019 by Deb Forgacs (dforgacs)

2. Mar 21, 2019 by Deb Forgacs (dforgacs)

3. Apr 6, 2019 by Deb Forgacs (dforgacs)

4. Feb 11, 2021 by Amy Elli (amyelli)

Major (ex. Special Education)

This proposal is

for a:

Revision

# Administration Details

Official Program

Chemistry, BSLAS

Name

Diploma Title

Sponsor College

Liberal Arts & Sciences

Sponsor

Chemistry

Department

Sponsor Name

Scott K. Silverman

Sponsor Email

sks@illinois.edu

College Contact

Stephen R. Downie Kelly Ritter

College Contact

Email

sdownie@illinois.edu ritterk@illinois.edu

College Budget <u>Michael Wellens</u>

Officer

College Budget

wellens@illinois.edu

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Scott K. Silverman, sks@illinois.edu

Does this program have inter-departmental administration?

No

# Proposal Title

Effective Catalog

Fall 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Bachelor of Science in Liberal Arts and Sciences in Chemistry in the College of Liberal Arts and Sciences

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This Chemistry, BSLAS proposal (key 271) is related to the Chemistry, BS proposal (key 272) and the Chemistry: Environmental Chemistry, BS (key 623).

# **Program Justification**

Provide a brief description of what changes are being made to the program.

We are proposing five changes. (1) Removing CHEM 496, which has been deactivated. This was a footnote as a substitution option for transfer students only. (2) Moving all footnotes up into the Program of Study degree requirements table. (3) Adding the college orientation course, e.g., LAS 101. Total credit hours will not change. (4) Simplifying the POS header text. The requirement itself will not change. (5) Revising the displayed number of "Chemistry and biochemistry" hours. The requirement itself will not change.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

No

Why are these changes necessary?

- 1. Removal of CHEM 496 because the course has been deactivated. This was a footnote as a substitution option for transfer students only.
- 2. Due to new guidance from campus for student transparency and clarity, footnotes are integrated into the POS.
- 3. The required college orientation course is added into the POS.
- 4. We have simplified the POS header text to remove unnecessary information.
- 5. We have revised the displayed number of "Chemistry and biochemistry" hours, from 22-26 hours to 30 hours. The requirement itself does not change. Formerly, "Chemistry and biochemistry" hours were listed as 22-26, with additional "Two other 300- or 400-level courses, at least one of which must be outside physical chemistry" at 4-8 hours, for a sum of 30 hours. Our revision more clearly brings all of these 30 hours under the single header of "Chemistry and biochemistry courses". A note in the POS covers the now-deleted "Two other 300- or 400-level..." text, as follows: "At least 12 of the 30 hours must be at the 300 or 400 level, including at least one course outside physical chemistry. These 12 hours must include CHEM 440 or CHEM 442 and may include MCB 354 or MCB 450." MCB 354 and 450 are included because they are biochemistry courses.

Chemistry, BSLAS 40 hours upper division sample plan:

Required courses:

CHEM 440 - 4 hours

CHEM 300 or 400 level electives - 8+ hours (typical BSLAS chemistry major: 15-16 advanced CHEM hours)

The above add up to 12+ hours, so at least 28 more qualifying hours are needed.

10 hours of 200 level courses with 2 prerequisites

CHEM 232 - 4 hours (prerequisites: CHEM 104 or 204 or 222/223, all of which require CHEM 102)

CHEM 233 - 2 hours (prerequisites: credit or concurrent registration in CHEM 232, which requires CHEM 104 or 204 or 222/223, all of which require CHEM 102) MATH 241 - 4 hours (prerequisites: MATH 220/221 and 231)

At least 18 more qualifying hours are needed. Of the free electives in the sample sequence, 18 of those hours must be additional advanced courses at 300 or 400 level in various disciplines, on top of the 12 hours of CHEM listed above that are currently required by campus/LAS.

Total equals 40 hours

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 this new program/proposed change result in the replacement of another program?

No

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

Yes

Courses outside of the sponsoring department/interdisciplinary departments

MCB 354 - Biochem & Phys Basis of Life MCB 450 - Introductory Biochemistry

Please attach any supporting letter MCB.pdf

letters of

support/acknowledgement

for any

Instructional

Resources

consider faculty,

students, and/or

other impacted

units as

appropriate.

# Program Regulation and Assessment

# Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

<u>Unchanged from the Learning Outcomes listed at http://catalog.illinois.edu</u>/undergraduate/las/chemistry-bslas/#learningoutcomestext

Students graduating with the BSLAS in Chemistry (Sciences & Letters) will have:

In addition to campus ICES forms at the end of the semester, we will use a combination of the Classroom Undergraduate Research Experience (CURE) survey and students' interviews to assess and improve studentlearning.1. The CURE survey (https://www.grinnell.edu/academics/resources/ctla/assessment/cure-survey) is a nationally recognized survey used by manyinstitutions. A thorough knowledge The survey utilizes questions from pretest at the beginning of the basic principles of chemistry, including atomic semester and molecular structure, chemical dynamics and the chemical and physical properties of substances. posttest at the end of the semester to assess student learning.

The survey is "open source" — any higher education organization or program that has classroom or laboratory components of undergraduate research education can access and freely distribute the survey tostudents. Having been vetted and utilized nationally, the survey is additionally useful in that a baseline of mean ratings by a reference cohort is reported and contrasted to our institution's results. Yi Lu has used this survey to assess CHEM 199Lpreviously. See Denofrio LA, Russell B, Lopatto D & Lu Y (2007) Mentoring: Linking student interests to

sciencecurricula. Science 318:1872–1873. 2. Interviews: An exposure to the subfields we will conduct interviews of chemistry, such as analytical, organic, physical, materials, inorganic, as well as chemical biology. the students from each course at the end of the semester to assess student's achievement of the stated learning objectives.

- 3. The ability to read, evaluate, interpret, and present (via oral and written communication) numerical, chemical and general scientific data, information and literature.
- <u>4.</u> The ability to carry out experiments, use appropriate experimental apparatus effectively, and demonstrate proper laboratory safety skills. We will use the results from ICES, CURE, and interviews to improve each syllabus and course content and thus student learning.

Describe how, when, and where these learning outcomes will be assessed.

### Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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/PublicAdminRules2017.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.

Revised programs <u>Comparative Table\_Chemistry, BSLAS</u>

\_SKS01.xlsx

SS Chemistry BSLAS\_SKS04.docx

Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

Departmental distinction: Students qualify for graduation with distinction by exhibiting superior performance in both course work and in senior thesis research. To be eligible, a student must have a UIUC coursework major grade point average of 3.25, must take CHEM 499 (normally for two semesters) and submit a senior thesis for evaluation, and must have their undergraduate research advisor submit to the department Head a letter of support attesting to the effort invested by the student. The minimum major GPAs for Distinction, High Distinction, and Highest Distinction are 3.25, 3.5, and 3.75 respectively. Final decisions on awarding Distinction honors will be made by the Head or designee.

Statement for

Programs of Study Catalog

**General education:** Students must complete the <u>Campus General Education</u> requirements including the campus general education language requirement.

Minimum required major and supporting course work: Minimum required major and supporting course work normally equates to 48-51 hours including at least 30 hours in Chemistry or Biochemistrycourses. Twelve hours of 300- and 400-level in in Chemistry and/or Biochemistry must be taken on this campus. Transfer credit in chemistry must be approved by an adviser in chemistry in order to be included in the 30hours. Minimum hours required for graduation: 120 hours, to include a minimum of 40 hours of upper-division coursework generally at the 300 and 400 level.

These hours can be drawn from all elements of the degree.

Course List

Code Title Hours

Code Title		Hours	
Orientation and Pr	ofessional Development		
	gn Your First Year Experience	<u>1</u>	
OR LAS 100 Succ	ess in LAS for International Student		
	nd Design Your First Year Experience		
OR <u>&amp; LAS 101</u> <u>all</u>	id Design Todi First Tear Experience		
	sfer Advantage	<u>1</u>	
Total Hours	<del>siei riavantage</del>	<u> </u>	
<u>10tai 110ai 5</u>	Cours	se List	
Code	Title	20 2.00	Hours
	chemistry courses including: 1, 2		<del>22-26</del>
Major Core Requir	•		
	chemistry courses		<u>30</u>
Chemistry and	biochemistry courses are any course	es in CHEM or BIOC.	
No more than 1	10 hours of the following courses ma	ay count toward the 30 hours: CHEM 197,	
CHEM 297, CHE	EM 397, CHEM 497, and CHEM 499.	The following courses do not count towards the	<u>1</u>
30 hours: CHE	M 101, CHEM 108, and CHEM 199.		
At least 12 of the	he 30 hours must be at the 300 or 4	100 level, including at least one course outside	
physical chemis	stry. These 12 hours must include C	HEM 440 or CHEM 442 and may include	
MCB 354 or MC	<u>CB 450.</u>		
<u>CHEM 150</u>	First Semester Success in Chemist	ry (Transfer students may elect to take an	
	additional 1 hour of 200 level or hi	gher Chemistry, including CHEM 297,	
	<u>CHEM 397</u> , <u>CHEM 497</u> , or <u>CHEM 49</u>	<u>99</u> .)	
General chemis	stry courses		
Select one of the			
<u>CHEM 102</u>	General Chemistry I		
<u>&amp; CHEM 103</u>	-		
<u>&amp; CHEM 104</u>			
<u>&amp; CHEM 105</u>			
<u>CHEM 202</u>	Accelerated Chemistry I	_	
<u>&amp; CHEM 203</u>	•	<u>I</u>	
<u>&amp; CHEM 204</u>	· · · · · · · · · · · · · · · · · · ·	**	
& CHEM 205		<u>II</u>	
Organic chemis	<del></del>		
Select one of the CHEM 232	Elementary Organic Chemistry I		
& CHEM 233		lah I	
CHEM 236	Fundamental Organic Chem I	Lab I	
& CHEM 237			
Physical chemis			
CHEM 440	Physical Chemistry Principles		
or CHEM 442	·		
	,	which must be outside physical chemistry.	4-8
Mathematics cours	·	• , , ,	
MATH 220	Calculus		4-5
or <u>MATH 221</u>	Calculus I		
MATH 231	Calculus II		3

Code Title Hours

MATH 241 Calculus III 4

Physics courses

Select one of the following: 8-10

PHYS 101 College Physics: Mech & Heat

& PHYS 102 and College Physics: E&M & Modern

PHYS 211 University Physics: Mechanics

& PHYS 212 and University Physics: Elec & Mag

120 hours.

**1**Excluding CHEM 101%7C, CHEM 108%7C, and CHEM 199%7C.**2** 

No more than 10 hours of the following courses may count toward the 22-26 hours in Chemistry: CHEM 197%7C, CHEM 199%7C, CHEM 297%7C, CHEM 397%7C, CHEM 496%7CCode, CHEM 497%7C, and CHEM 499%7C.

3

On- and off-campus transfer students in the BSLAS curriculum may substitute CHEM 152 for CHEM 150. Alternatively, transfer students may elect to take an additional 1 hour of 200 level or higher Chemistry, including CHEM 297, CHEM 397, CHEM 496, CHEM 497, or CHEM 499 as long as no more than 10 total hours of the total 22-26 required Chemistry hours come from CHEM 297, CHEM 397, CHEM 496, CHEM 497, CHEM 499.

Corresponding BSLAS Bachelor of Science in Liberal Arts

Degree and Sciences

## **Program Features**

Academic Level Undergraduate

Does this major No

have transcripted concentrations?

What is the typical time to completion of this program?

4 years

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

120

CIP Code 400501 - Chemistry, General.

Is This a Teacher Certification Program?

Yes

Will specialized accreditation be sought for this program?

No

# **Delivery Method**

This program is available:

On Campus - Students are required to be on campus, they may take some online courses.

# Admission Requirements

Desired Effective

Fall 2024

Admissions Term

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

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

No impact on enrollment and degrees awarded is expected.

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

What is the

Fall

matriculation term for this program?

# Budget

Are there

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

No

Additional Budget

Information

We have used unpaid peer mentors in the teaching of both CHEM 199FY (150) and CHEM 199L (152). Because the peer mentors receive course credit for their role, there is no budget impact in that regard. The use of unpaid peer mentors will continue for both CHEM 150 and CHEM 152. The teaching of CHEM 199L has involved both graduate TAs and undergraduate student hourly TAs, and this will continue with the course formally offered as CHEM 152. There will likely be a slight increase in the graduate TA usage (e.g., from 0.75 FTE per semester to 1.0 FTE per semester), to accommodate the increased enrollment due to the now-required nature of CHEM 152.

### Financial Resources

How does the unit intend to financially support this proposal?

No impact on financial resources is expected. The primary recurring financial impact on the Department of Chemistry will be the slight increase in the graduate TA usage (e.g., from 0.75 FTE per semester to 1.0 FTE per semester), to accommodate the increased enrollment due to the now-required nature of CHEM 152. This is a relatively small financial burden in the context of Chemistry's overall TA budget.

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

No

Attach letters of support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

**Chemistry Differential** 

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

Nο

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

This will not affect faculty resources.

# Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

We shared and discussed our proposal with Mary Schlembach, Chemistry Librarian. The library collections, resources and services are sufficient to support this proposal.

## **EP** Documentation

**EP Control** 

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

No

requires HLC

### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook

BSLAS: Chemistry - UIUC

Name

Program Code: 10KV0335BSLA

MinorConcDegreeBSLASMajorCodeCodeCodeCode

0335

Senate Approval

Date

Senate Conference Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

DOE Approval

Date

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer Comments

ments Andrea

**Brooke Newell (bsnewell) (10/09/23 12:38 pm):** Rollback: Email sent to Scott, Andrea and Stephen

Brooke Newell (bsnewell) (11/30/23 9:18 am): Rollback: Email sent to Scott,

Andrea, and Stephen

Brooke Newell (bsnewell) (12/12/23 12:15 pm): Rollback: Email sent to Scott,

Andrea, and Stephen



#### **COLLEGE OF LIBERAL ARTS & SCIENCES**

School of Molecular & Cellular Biology MCB Instructional Program 127 Burrill Hall, MC-119 407 S. Goodwin Ave. Urbana, IL 61801

December 15, 2023

Scott Silverman, PhD
Professor of Chemistry and Assoc. Head of Budget & Operations
Department of Chemistry

Dear Professor Silverman,

The School of Molecular and Cellular Biology (SMCB) is supportive of the inclusion of MCB 354: xxx and MCB 450: xxx in the revised BSLAS chemistry degree requirement, as options for "Chemistry and biochemistry courses." We anticipate no instructional impact on SMCB, because this inclusion represents a clarification of the existing BSLAS chemistry degree requirements and not an actual change in those requirements.

We wish you luck with your program revision.

Sincerely,

Melissa Michael

Melissa Michael Associate Director for Curriculum & Instruction mmichae@illinois.edu

cc: Milan Bagchi, Director
School of Molecular and Cellular Biology

## Sample Sequence for Chemistry, BSLAS

## http://catalog.illinois.edu/undergraduate/las/chemistry-bslas/#degreerequirementstext

First Year			
First Semester Courses	Hours	Second Semester Courses	Hours
LAS 101	1	CHEM 104	3
CHEM 150	1	CHEM 105	1
CHEM 102	3	MATH 231 (Gen Ed: QR I)	3
CHEM 103	1	Composition I course - or LOTE (3rd level)	3
MATH 220 (or MATH 221) (Gen Ed: QR I)	4-5 (use 4)	General Education course	3
LOTE (3rd level) - or, Composition I course	4	Free elective course	3
semester sum	14	semester sum	16
Second Year			
First Semester Courses	Hours	Second Semester Courses	Hours
MATH 241 (Gen Ed: QR II)	4	CHEM/BIOC course	3
CHEM 232	4	General Education courses	6
CHEM 233	2	Free elective courses	6
LOTE (4th level)	4		
semester sum	14	semester sum	15

Continued on next page

Third Year			
First Semester Courses	Hours	Second Semester Courses	Hours
CHEM 300- or 400- level course	4	CHEM 300- or 400- level course	4
PHYS 101 or PHYS 211 (Gen Ed: NST & QR II)	4-5 (use 5)	PHYS 102 or PHYS 212 (Gen Ed: NST & QR II)	4-5 (use 5)
General Education courses	6	General Education course	3
		Free elective course	4
semester sum	15	semester sum	16
Fourth Year			
First Semester Courses	Hours	Second Semester Courses	Hours
CHEM 440 or CHEM 442	4	General Education course	3
General Education course	3	Free elective courses	12
Free elective courses	8		
semester sum	15	semester sum	15
Total Hours: 120 (Add up individual semester sums. Must <b>equal</b> degree total minimum hours requirement listed on the degree's requirements page in the catalog.)			

## Chemistry, BSLAS

# Green = Course Addition Red = Course Removal Yellow = Updated Text or credit hours

Orange = Order changed only

Orange = Order changed only			
Current Requirements	Current Hours	Proposed Requirements	Proposed Hours
		Orientation and Professional	i
		Development	
		LAS 101	1
		or	
		LAS 100 & LAS 101	3
		or	
		LAS 102	1
		Total Hours	1 or 3
		Major Core Requirements and Electives	
Chemistry and biochemistry courses	22-26	Chemistry and Biochemistry courses	30
including: 1, 2		2	•
		No more than 10 hours of the following	i
		courses may count toward the 30 hours:	i
		CHEM 197, CHEM 297, CHEM 397,	i
		CHEM 197, CHEM 297, CHEM 397, CHEM 497, and CHEM 499. The following	l
		,	ı
		courses do not count towards the 30 hours:	l
		CHEM 101, CHEM 108, and CHEM 199.	i
		At least 12 of the 30 hours must be at	
		the 300 or 400 level, including at least one	l
		course outside physical chemistry. These	l
		12 hours must include CHEM 440 or	ı
		CHEM 442 and may include MCB 354 or	ı
		MCB 450.	i
		INCD 150.	
		CHEM 150 (Transfer students may elect	
3	_	to take an additional 1 hour of 200 level or	1
CHEM 150 <sup>3</sup>	1	higher Chemistry, including CHEM 297,	l
		CHEM 397, CHEM 497, or CHEM 499.)	i
		General chemistry courses	
		Select one of the following:	
		CHEM 102	
		& CHEM 103	
		& CHEM 104	
		& CHEM 105	
		CHEM 202	
		& CHEM 203	
		& CHEM 204	
		& CHEWI 204	

(Key: 271)

4	Organic chemistry courses Select one of the following: CHEM 232 & CHEM 233 CHEM 236 & CHEM 237  Physical chemistry course CHEM 440 or CHEM 442	
4	Select one of the following:  CHEM 232  & CHEM 233  CHEM 236  & CHEM 237  Physical chemistry course	
4	CHEM 232 & CHEM 233 CHEM 236 & CHEM 237  Physical chemistry course	
4	& CHEM 233 CHEM 236 & CHEM 237  Physical chemistry course	
4	CHEM 236 & CHEM 237  Physical chemistry course	
4	& CHEM 237  Physical chemistry course	
4	Physical chemistry course	
4		
4	CHEM 440 or CHEM 442	
	CHERT TO ST CHERT TIE	
	Two other 300- or 400-level courses, at	
4-8	least one of which must be outside physical	4-8
1.0	chemistry.	. 0
-	chemistry.	
	Mathematics courses	
4-5	MATH 220 or MATH 221	4-5
3	MATH 231	3
4	MATH 241	4
-	Dhysics courses	
§ 10		8-10
0-10		0-10
-		
-	PHYS 211 & PHYS 212	
_		
$\overline{}$		
	3	4-5  MATH 220 or MATH 221  MATH 231  MATH 241  Physics courses



Date Submitted: 10/02/23 11:37 am

Viewing: 6091: Data Science and

**Engineering - Floating** 

Last approved: 09/29/22 8:13 am

Last edit: 12/15/23 8:40 pm

Changes proposed by: Keri Pipkins

**Data Science & Engineering Concentration** 

Catalog Pages Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1246 Head
- 3. KP Committee Chair
- 4. KP Dean
- 5. University
  Librarian
- 6. Grad\_College
- **7. COTE Programs**
- 8. Provost

#### 9. Senate EPC

- 10. Senate
- 11. U Senate Conf
- 12. Board of Trustees
- 13. IBHE
- 14. HLC
- 15. DOE
- 16. DMI

## **Approval Path**

- 1. 10/02/23 3:21 pm Donna Butler (dbutler): Approved for U
- Program Review 2. 10/04/23 3:43 pm
  - Luke Olson (lukeO): Approved for 1246 Head
- 10/20/23 8:56 am
   Keri Pipkins (kcp):
   Approved for KP
   Committee Chair
- 4. 10/20/23 9:34 am
  Cindy Pruitt
  (cpruitt):
  Approved for KP
  Dean
- 5. 10/22/23 2:50 pm Claire Stewart (clairest):

Approved for University Librarian 6. 11/08/23 4:08 pm Allison McKinney (agrindly): Approved for Grad\_College 7. 11/08/23 4:30 pm Suzanne Lee (suzannel): Approved for **COTE Programs** 8. 11/09/23 8:22 am Brooke Newell (bsnewell): Rollback to KP Committee Chair for Provost 9. 11/09/23 8:29 am Keri Pipkins (kcp): Approved for KP Committee Chair 10. 11/09/23 8:40 am Michael Stoller (stoller4): Approved for KP Dean 11. 11/26/23 12:05 pm Claire Stewart (clairest): Approved for University Librarian 12. 11/30/23 9:55 am Allison McKinney (agrindly): Approved for Grad\_College 13. 11/30/23 10:04 am Suzanne Lee (suzannel): Approved for **COTE Programs** 

14. 12/07/23 9:33 am Brooke Newell

(bsnewell): Approved for Provost

## History

- 1. Mar 29, 2022 by Luke Olson (lukeO)
- 2. Sep 29, 2022 by Bryan Wang (bpcwang)

Concentration (ex. Dietetics)

This proposal is

for a:

Revision

#### Administration Details

Official Program

Data Science and Engineering - Floating

Name

Diploma Title

Sponsor College Grainger College of Engineering

Sponsor

Computational Science and Engineering

Department

Sponsor Name Luke Olson

Sponsor Email lukeo@illinois.edu

College Contact Keri Pipkins College Contact

Email

kcp@illinois.edu

College Budget

Tessa Hile

Officer

College Budget

tmhile@illinois.edu

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Please rollback to KP Committee.

Does this program have inter-departmental administration?

No

## Proposal Title

Effective Catalog Spring 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Concentration in Data Science and Engineering in the Grainger College of Engineering and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

## **Program Justification**

Provide a brief description of what changes are being made to the program.

- 1. Add 4 participating programs- PHD:Theor&Appl Mechanics (10KS0242PHD), PHD:Env Engr Civil Engr (10KS0231PHD), PHD:Sys&Entreprnural Eng (10KS3846PHD), PHD:Astronomy (10KS0333PHD)
- 2. Changed the elective statement from "Complete two additional courses from the approved list." to "Complete two additional courses in consultation with the CSE Education Coordinator or CSE Director."

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

<u>No</u>

Why are these changes necessary?

- 1. In the dynamic field of data science education, it's crucial to evolve our curriculum to meet industry demands. We propose expanding the Data Science & Engineering (DSE) concentration to include PhD students in Astronomy, tapping into the rich data challenges astronomy offers. Furthermore, we are including 3 programs that were intended to be listed in the initial proposal (Theoretical and Applied Mechanics, Environmental Engineering, and System & Entrepreneurial Engineering) to further enhance our offerings.
- 2. New data science courses are being developed, revised, and updated frequently by our partnering departments. We want to allow students to be able to take newly developed courses that may be under "Special Topics" course rubrics. All elective courses are reviewed by the CSE Steering Committee, which includes faculty from all of the partner departments, and students choose their electives in consultation with the CSE Education Coordinator.

#### 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 this new program/proposed change result in the replacement of another program?

No

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

Yes

Courses outside of the sponsoring department/interdisciplinary departments

Please attach any <u>DSE concentration MechSE.pdf</u>
letters of <u>DSE concentration ISE.pdf</u>
support/acknowledge<del>D@ntconcentration CEE.pdf</del>
for any <u>DSE concentration Astr.pdf</u>

Instructional
Resources
consider faculty,
students, and/or
other impacted
units as

appropriate.

## Program Regulation and Assessment

#### Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

The learning objectives of the concentration include satisfactory completion of the core coursework along with completion of the electives component. These are selected in consultation with the unit and based on the Strategic Plan Task Force report on Data Science Education at the University of Illinois at Urbana-Champaign, which highlights key areas of data science in the curriculum, namely mathematical foundations, computational thinking, statistical thinking, data management, data description and curation, and data modeling.

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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/PublicAdminRules2017.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.

Revised programs <u>DSE Side-by-side Oct 2023 .pdf</u>
Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

The Data Science & Engineering (DSE) Transcriptable Graduate Concentration is designed primarily for graduate students at the Ph.D. levels with an interest in data intensive computing. Data science plays a major role in many areas of computational science and engineering

(CSE) — the DSE Concentration is open to domain scientists working in this area. This concentration requires students to complete 16 graduate credit hours spanning data science, from topics in mathematical foundations (MF), computational thinking (CT), statistical thinking (ST), as well as data management, description, and modeling (DX). Courses taken toward this concentration will count towards the student's graduate degree if permitted by the curriculum of their major, and the concentration will be listed on their transcript upon graduation.

Note: A graduate concentration is only available for students enrolled in participating graduate degree programs.

To fulfill the requirements of the graduate concentration, students will take courses selected from an established list of core courses, along with a courses from a selection of elective courses that span a range of domain areas. Students may select any course in the list of electives, regardless of their enrolled degree program.

Additionally, understanding the ethical and societal implications of the application of data science is paramount, and CSE will integrate the latest topics to help educate future data scientists on appropriately developing and applying data science algorithms that impact society. To ensure that students in the Data Science & Engineering Graduate Concentration are exposed to current topics in this area and to highlight the how data science decisions can have real-world significance, CSE will (1) require that all DSE-seeking students attend at least one seminar on data science and social justice and (2) complete the self-paced Practical Data Ethics course developed by the UCSF Center for Applied Data Ethics. Students must affirm that they completed the course and will be required to report on their experience in order to receive the DSE Concentration. CSE will annually evaluate this requirement as additional on-and off-campus resources become available.

Statement for Programs of Study Catalog

Course List

Hours

8

Code Title

Core Coursework

Select at least one course from two of the three groups below.

Mathematical Foundations (MF) &Statistical Thinking (ST)

STAT 425

Statistical Modeling I

STAT 432

Basics of Statistical Learning

CSE 448 Advanced Data Analysis
CS 441 Applied Machine Learning

CS 446 Machine Learning

Mathematical Foundations (MF) & Computational Thinking (CT)

Code Title Hours

CS 450 Numerical Analysis
CS 484 Parallel Programming
CSE 428 Statistical Computing

Data Description and Curation (DX) & Data Modeling (DX)

STAT 480 Big Data Analytics

CS 412 Introduction to Data Mining

Elective Coursework 8

Complete two additional courses in consultation with the CSE Education

Coordinator or CSE Director.

<u>Total Hours (Core + Elective):</u> <u>16</u>

#### **Other Requirements**

Grad Other Degree Requirements Single Column

Requirement

At least 4 hours of coursework for the DSE concentration should be advanced (500-level courses) For students enrolled in both the DSE concentration and the CSE concentration, at least 12 hours of coursework earned for the DSE concentration must be distinct from credit earned for the CSE concentration.

## Program Relationships

#### Corresponding

Program(s):

Corresponding Program(s)

Aerospace Engineering, PhD

Agricultural & Biological Engineering, PhD

Astronomy, PhD

Bioengineering, PhD

Civil Engineering, PhD

Computer Science, PhD

Electrical and Computer Engineering, PhD

Environmental Engineering in Civil Engineering, PhD

Industrial Engineering, PhD

Materials Science and Engineering, PhD

Mechanical Engineering, PhD

Nuclear, Plasma, and Radiological Engineering, PhD

Physics, PhD

Statistics, PhD

Systems & Entrepreneurial Engineering, PhD

Theoretical & Applied Mechanics, PhD

## Program Features

Academic Level Graduate

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)

This estimated enrollment is expected at around 25 students for the first year, and growing as course capacities are assessed. This is based on an estimated five students per participating department, which is initially five. Based on the Computational Science and Engineering (CSE) concentration, we anticipate strong interest and that this concentration could grow well into the hundreds.

The Education Coordinator in CSE currently oversees curriculum change and guidance for the unit. This coordinator will also take on the role of advising and curriculum changes for DSE\@. There is natural overlap with the two programs and for the first years we anticipate absorbing this additional advising capacity without issue. As the program scales, some advising will naturally fall with the home unit (e.g.\ during graduate student recruitment), however as with the CSE concentration we do not foresee these demands to be significant.

## **Delivery Method**

This program is available:

On Campus - Students are required to be on campus, they may take some online courses.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

We expect enrollment increase from new participating programs

## Budget

Are there

No

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

Nο

Additional Budget

Information

Advising will be handled by existing staff.

Attach File(s)

#### Financial Resources

How does the unit intend to financially support this proposal?

The education coordinator for Computational Science and Engineering will take on the majority of the advising, curriculum changes and coordination, and promotional materials for the concentration. Recurring state funds that support the unit will be used to continue to support the staffing of this position.

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

No

Attach letters of support

Is this program requesting self-supporting status?

No

## Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

Faculty resources are sufficient to support the addition of 4 participating programs and 2 elective courses.

#### Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Library collections, resources, and services are sufficient to support the addition of 4 participating programs.

#### **EP** Documentation

EP Control

EP.24.051

Number

Attach

Rollback/Approval

Notices

This proposal

No

requires HLC

inquiry

## **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook Data Science and Engineering

Name

Program Code: 6091

Minor Conc 6091 Degree Major Code Code Code Code

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

DOE Approval

NA

Date

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer Comments

Mary Lowry (lowry) (04/14/23 2:12 pm): Rollback: Please see email

Brooke Newell (bsnewell) (04/26/23 8:49 am): Rollback: Requested revisions for

Instructional Resources, Justification, Program of Study, and Library Resources Statement. Detailed email sent to Bryan, Luke, and Keri

**Brooke Newell (bsnewell) (08/30/23 8:57 am):** Rollback: Requested revisions to justification, instructional resources, Program of Study sections. Email sent to Bryan and Keri Carter Pipkins.

Brooke Newell (bsnewell) (09/22/23 12:42 pm): Rollback: Email sent to Bryan and Keri

**Brooke Newell (bsnewell) (11/09/23 8:22 am):** Rollback: Per discussion with Keri to revise Justification statement accordingly

Key: 1045



**ASTRONOMY** 

College of Liberal Arts & Sciences 103 Astronomy Building 1002 W. Green Street Urbana, IL 61801 USA

June 23, 2023

Professor Leslie W. Looney, Chair 123 Astronomy Building Phone: 217.244.3615 W@illinois.edu

#### Dear Colleagues:

The Department of Astronomy strongly supports being added to the list of Departments whose graduate students are eligible to be included in the Data Science & Engineering (DSE)

Transcriptable Graduate Concentration. Illinois Astronomy is leveraging our students to take advantage of new large observing surveys, which require expertise in data-intensive computing. Having a data-science concentration would be an excellent opportunity for our graduate students.

The Department of Astronomy strongly supports the addition of ASTR 596FDS *Fundamentals of Data Science* and ASTR 596Al *Artificial Intelligence and Big Data in Astronomy* to the DSE concentration

Sincerely,

Leslie W. Looney,

Professor and Chair of Astronomy



#### THE GRAINGER COLLEGE OF ENGINEERING

Department of Civil & Environmental Engineering Newmark Civil Engineering Laboratory, MC-250 205 N. Mathews Ave. Urbana, IL 61801

#### **MEMORANDUM**

TO: Luke Olson, Professor and Director of Computational Science and Engineering

Program, Department of Computer Science

FROM: Ana P. Barros

Donald Biggar Willett Chair and Head, Department of Civil and Environmental

Engineering

DATE: January 10, 2023

SUBJECT: Department Support for Ph.D. Concentration in Data Science and Engineering (DSE)

The Department of Civil and Environmental Engineering enthusiastically supports the Data Science and Engineering (DSE) Graduate Concentration for our two Ph.D. degree programs in Civil Engineering and Environmental Engineering. The program codes are PHD:Civil Engineering 10KS0106PHD and PHD:Env Engr Civil Engr code 10KS0231PHD. Our faculty and graduate students are at the forefront of research that uses the latest developments in data science and new data streams enabled by novel monitoring and sensing systems. The Transcriptable Graduate Concentration in DSE will not only be a valuable credential for our graduates, but it will also enable us to more effectively recruit top applicants to our Ph.D. program.



#### THE GRAINGER COLLEGE OF ENGINEERING

Department of Industrial & Enterprise Systems Engineering 117 Transportation Building, MC-238 104 S. Mathews Ave. Urbana. IL 61801-2925

TO: Luke Olson, Department of Computer Science

FROM: Jeff Shamma, Department Head, ISE

DATE: January 14, 2023

SUBJECT: ISE participation Data Science and Engineering concentration

The Department of Industrial and Enterprise Systems Engineering (ISE) is glad to support the participation of both IE (code 10KS0127PHD) and SEE (code 10KS3846PHD) PhD students in the Data Science and Engineering Concentration.



#### THE GRAINGER COLLEGE OF ENGINEERING

Department of Mechanical Science & Engineering
Office of the Department Head
144 Sidney Lu Mechanical Engineering Building, MC-244
1206 W. Green St.
Urbana, IL 61801

January 25, 2023

#### To Whom it May Concern:

Mechanical Science and Engineering strongly supports the proposal for a Data Science & Engineering Concentration (DSE). We support this request to allow the DSE concentration for both our Mechanical Engineering and our Theoretical and Applied Mechanics Programs. We anticipate this concentration will be of interest to doctoral students in MechSE and look forward to it being available to them.

Sincerely,

Anthony Jacobi

Richard W. Kritzer Distinguished Professor

Department Head

Mechanical Science and Engineering

KEY
GREEN HIGHLIGHT = Course addition, requirement replacement or updated hours
RED HIGHLIGHT = Course to be removed from listed requirements.
Yellow Highlight - Revision to requirement

Current	Current Program of Study		
Core Cours	sework	8	
Select at lea	ast one course from two of the three groups below.		
Mathematica	al Foundations (MF) &Statistical Thinking (ST)		
STAT 425	Statistical Modeling I	3 or 4	
STAT 432	Basics of Statistical Learning	3 or 4	
CSE 448	Advanced Data Analysis		
CS 441	Applied Machine Learning	3 or 4	
CS 446	Machine Learning	3 or 4	
Mathematica	al Foundations (MF) & Computational Thinking (CT)		
CS 450	Numerical Analysis	3 or 4	
CS 484	Parallel Programming	3 or 4	
CSE 428	Statistical Computing	3 or 4	
Data Descrip	otion and Curation (DX) & Data Modeling (DX)		
STAT 480	Data Science Foundations	3 or 4	
CS 412	Introduction to Data Mining	3 or 4	
Elective Co	oursework		
Complete two	o additional courses from the approved list.	·	

New Program o	f Study	
Core Coursework		8
Select at least one cour	se from two of the three groups below.	
Mathematical Foundation	ns (MF) &Statistical Thinking (ST)	
STAT 425	Statistical Modeling I	3 or 4
STAT 432	Basics of Statistical Learning	3 or 4
CSE 448	Advanced Data Analysis	4
CS 441	Applied Machine Learning	3 or 4
CS 446	Machine Learning	3 or 4
Mathematical Foundation	ns (MF) & Computational Thinking (CT)	
CS 450	Numerical Analysis	3 or 4
CS 484	Parallel Programming	3 or 4
CSE 428	Statistical Computing	3 or 4
Data Description and Cu	ration (DX) & Data Modeling (DX)	
STAT 480	Data Science Foundations	3 or 4
CS 412	Introduction to Data Mining	3 or 4
Elective Coursework		8
Complete two additional co	ourses in consultation with the CSE Education Coordinator or 0	CSE Director.
Total Hours (Core + E	ective):	16

Date Submitted: 10/30/23 3:25 pm

Viewing: 1PKS6141CERU: CPA

Pathways, CERT (online)

Last approved: 09/26/22 12:53 pm

Last edit: 12/12/23 1:08 pm Changes proposed by: Amanda Brantner

CPA Pathways, CERT

Catalog Pages Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1346 Head
- 3. KM Committee Chair
- 4. KM Dean
- 5. University Librarian
- 6. Grad\_College
- 7. COTE Programs
- 8. Provost

#### 9. Senate EPC

- 10. Senate
- 11. U Senate Conf
- 12. Board of Trustees
- 13. IBHE
- 14. HLC
- 15. DOE
- 16. DMI

## **Approval Path**

1. 11/02/23 11:46 am

Donna Butler (dbutler):

Approved for U Program Review

2. 11/02/23 1:55 pm Michael Donohoe (mdonohoe): Approved for 1346

Head

3. 11/10/23 3:02 pm Mitch Fisher

(mfisher6): Approved for KM

Committee Chair

4. 11/13/23 12:34 pm Brooke Elliott

(wbe): Approved for KM Dean

5. 11/26/23 11:42 am Claire Stewart (clairest): Approved for University

Librarian

6. 12/04/23 2:50 pm Allison McKinney (agrindly): Approved for Grad\_College

7. 12/04/23 6:22 pm Suzanne Lee (suzannel): Approved for COTE Programs

8. 12/07/23 9:32 am
Brooke Newell
(bsnewell):
Approved for
Provost

## History

1. Sep 26, 2022 by Dustin Yocum (dyocum)

Major (ex. Special Education)

This proposal is

for a:
Revision

#### Administration Details

Official Program

Name

CPA Pathways, CERT (online)

Diploma Title Certificate in CPA Pathways

Sponsor College Gies College of Business

Sponsor A

Department

Accountancy

Sponsor Name Brooke Elliott, Associate Den, EY Distinguished Professor in

Accounting; Michael Donohoe, Professor of Accountancy; Nerissa

Brown, Associate Professor of Accountancy; Oktay Urcan,

Associate Professor of Accountancy

Sponsor Email <a href="wbe@illinois.edu">wbe@illinois.edu</a>; mdonohoe@illinois.edu; nerissab@illinois.edu;

ourcan@illinois.edu

College Contact <u>Amanda Brantner</u> <u>Dustin Yocum</u> College Contact

Email

<u>amandab@illinois.edu</u> <del>dyocum@illinois.edu</del>

College Budget

Gina Oleynichak

Officer

College Budget

goleynic@uillinois.edu

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Amanda Brantner

Does this program have inter-departmental administration?

No

## **Proposal Title**

Effective Catalog Spring 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Campus Graduate Certificate in CPA Pathways in the Gies College of Business and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

#### **Program Justification**

Provide a brief description of what changes are being made to the program.

1. Program requirements have been revised from requiring at least one course from the first list of elective options and selection of 4 hours from the second list of elective options to select at least 2 credit hours from the first list of electives and select the balance of 12 credit hours from the first and second lists of electives.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

Why are these changes necessary?

1. The proposed revision has been made to allow learners to choose elective courses from the two groups of elective of options with more flexibility.

#### 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 this new program/proposed change result in the replacement of another program?

No

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

No

## Program Regulation and Assessment

## Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

The learning objectives primarily include the ability to understand and evaluate:

- 1. The courses in the CPA Pathways Campus Graduate Certificate can be used to meet the educational requirements for the Uniform CPA Exam.
- 2. Accounting for mergers and acquisitions: investment accounting, preparation of consolidated financial statements, business combination achieved in stages, divestitures and deconsolidations, segment reporting, goodwill / allocation impairment, and variable interest entities.
- 3. The U.S. federal income tax treatment of corporations and pass-through entities, including Subchapter S corporations, partnerships, and limited liability companies;
- 4. A variety of tools to break apart financial reports into meaningful units for analysis, forecast financial statements, and value a firm and the models necessary to analyze, interpret, understand, and use financial information in a valuation setting.
- 5. Methods to (i) apply data analytics in a variety of accounting and business contexts, (ii) critically solve business problems using data-intensive business and accounting information, and (iii) synthesize and effectively communicate data-intensive information, findings, and conclusions to other environment-constituents, including supervisors, peers and subordinates, clients, and regulatory agencies

All of the courses are currently included in the larger iDegree portfolio and will be taught by existing faculty.

Describe how, when, and where these learning outcomes will be assessed.

#### Describe here:

The student learning outcomes will primarily be assessed via course-embedded assessments such as individual projects, assignments, and in some cases specific exam questions. Whenever possible, we will complement the course-embedded measures with indirect measures such as student surveys. Assessment data will be collected annually at the end of the academic year. Faculty teaching courses where learning outcomes are assessed are responsible for submitting learning outcomes assessment data to the Chair of the iDegree Curriculum committee.

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

The goal is for 90% of students enrolled in the certificate program to meet or exceed expectations on each of the program's learning outcomes.

The performance thresholds for each learning outcome are as follows:

- 0% 79.99%: Below Expectations
- 80% 89.99%: Meets Expectations
- 90% 100%: Exceeds Expectations

It is at the discretion of faculty teaching courses where learning outcomes are assessed to adjust these thresholds and expectations. Any deviations will be noted in the assessment reports submitted to internal and external accrediting bodies.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

The Director of Faculty Development and Accreditation, Martin Maurer (maurer1@illinois.edu), coordinates the learning outcomes assessment efforts for the Gies College of Business. The online programs Academic Directors ensures the program assessments are completed by faculty teaching the courses where the learning outcomes are assessed. Faculty will be asked to provide initial insights and observations about the learning outcomes data at the course-level.

After assessment information is collected, it is evaluated by the iDegree Curriculum Committee. The Committee Chair then shares and discusses the learning outcomes assessment information with all instructors teaching certificate courses. This enables each instructor to understand their course's assessment of learning so that they can build on strengths and correct any deficiencies, and it enables that iDegree Curriculum Committee to address any curriculum-wide deficiencies. Any agreed upon changes to address student performance on the learning outcomes assessed will be documented by the committee and implemented in a subsequent term. The impact of the changes will be reassessed at least on an annual basis.

Program
Description and
Requirements
Attach Documents

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

## 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/PublicAdminRules2017.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.

Catalog Page Text - Overview Tab

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

The CPA Pathways Campus Graduate Certificate combines advanced technical knowledge in financial accounting, taxation, and data analytics with professional competencies in critical thinking, communication, leadership, and strategic decision-making. Students will study advanced principles, concepts, and methods used to record and report the transactions and taxation of a business entity, as well as the data analytics tools and processes to analyze accounting information. Students will also apply their knowledge in practical, real-world settings via experiential learning opportunities. Career opportunities for students who complete the CPA Pathways Campus Graduate Certificate include positions in audit and assurance services, corporate accounting, taxation, consulting and advisory services, and in governmental and not-for-profit entities.

Course substitutions may be approved by the Department of Accountancy.

Students who have successfully completed this certificate may use the certificate to satisfy the following degree requirements, provided they apply and are admitted to the degree program:

- 12 hours of elective coursework requirements of the iMBA degree program
- 12 hours of elective coursework requirements of the iMSM degree program
- 12 hours of elective coursework requirements of the iMSA degree program

Statement for

Programs of Study Catalog

**Graduation Requirements** 

**Minimum Cumulative GPA: 2.75** 

#### Minimum hours required for certificate completion: 12 hours

Students who have successfully completed the *CPA Pathways* certificate may use the certificate to satisfy the following degree requirements, provided they apply and are admitted to the degree program:

- 12 hours of elective coursework requirements of the iMBA degree program
- 12 hours of elective coursework requirements of the iMSM degree program
- 12 hours of elective coursework requirements of the iMSA degree program

Course List

Code Title Hours

Code Title	Hours
Required:	
ACCY 569 Data Driven Decisions in Accounting	2
ACCY 576 Data Preparation for Accounting	2
Select at least 2 credit hours from the following list:	
ACCY 504 Auditing	2 or 4
ACCY 506 Advanced Topics in Accounting	4
ACCY 507 Taxation of Business Entities	2 or 4
ACCY 516 Professional Responsibility and Ethics for Accountants	3 or 4
ACCY 517 Financial Statement Analysis and Valuation	2 or 4
Select the balance of 12 credit hours from the list above or the list below	w:
ACCY 577 Machine Learning for Accounting	2
ACCY 578 Accounting Analytics Applications	1
BADM 403 Corporate & Commercial Law	4
MBA 563 Data Toolkit: Business Data Modeling & Predictive Analytics	4
MBA 564 Data Analytics Applications in Business	2
MBA 565 Infonomics	4
Total Hours	12

Corresponding

**CERT Campus Graduate Certificate** 

Degree

## Program Features

Academic Level Graduate

Does this major No

have transcripted concentrations?

What is the typical time to completion of this program?

32 weeks

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

12

What is the 2.75

required GPA?

CIP Code 520301 - Accounting.

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

## **Delivery Method**

This program is

available:

Online Only - The entire program is delivered online, students are not required to come to campus.

Describe the use of this delivery method:

Courses are delivered fully online through Canvas and Coursera. Each course has two structural components. One component is the self-directed, asynchronous part of the course, which is designed to help students develop foundational knowledge. This material is delivered via pre-recorded videos, complementary readings, and quizzes.

The second component is the high engagement part of the course. It is an expansion of the foundational materials and involves weekly live sessions in a virtual classroom led by Gies Business faculty. Other high-engagement content will come in the form of readings, in-depth exercises and assignments, and case studies.

#### Admission Requirements

Desired Effective Admissions Term

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

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

The Campus Graduate Certificate in CPA Pathways is only available for non-degree student enrollment. Prospective applicants must apply for admission to the Campus Graduate Certificate specifically through the Graduate College admissions process. Admission requires a Bachelor's degree in Accountancy.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

None expected.

Estimated Annual Number of Degrees Awarded

Year One Estimate 40 5th Year Estimate (or when 80

fully implemented)

What is the Spring/Summer/Other matriculation term for this program?

Please give an explanation of why fall matriculation is not applicable:

Completion of the CPA Pathways Campus Graduate Certificate will be possible across multiple terms.

## Budget

Are there

No

budgetary

implications for this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget Information

Attach File(s)

#### Financial Resources

How does the unit intend to financially support this proposal?

Current academic and administrative staff in the Department of Accountancy and Gies College of Business Online Programs office have the capacity to serve as advisors, maintain records, and process student registration in the Campus Graduate Certificate and related coursework.

Current instructional staff in the Department of Accountancy will offer and instruct the courses. Should demand for this Campus Graduate Certificate exceed expectations, new faculty may be recruited to teach some of the courses. Funding for these additional faculty will come from Department and College resources currently available for existing faculty lines.

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

No

Attach letters of support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

Business Specialized Masters/iMSA rate Masters

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

No

Is this program requesting self-supporting status?

Yes

## Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

The revision will not have an impact on faculty resources.

## Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Those admitted to this Campus Graduate Certificate will be non-degree students who may have limited demand for library resources. Given the profile of these students and the limited duration of their status as enrolled students, the resource demand is expected to be minimal.

#### **EP Documentation**

EP Control

EP.24.051

No

Number

Attach

Rollback/Approval

**Notices** 

This proposal

requires HLC

inquiry

#### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook

CERT: CPA Pathway ONL - UIUC

Name

Program Code: 1PKS6141CERU

Minor Conc Degree CERT Major Code Code Code Code

6141

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

DOE Approval

Date

8/29/2022

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer Comments Mary Lowry (lowry) (10/27/23 8:54 am): Rollback: Please see emails from 10-27-23

Claire Stewart (clairest) (11/26/23 11:42 am): Assessment of online student use of Library resources is actively underway; data may not bear out the proposers' assertion that these non-degree students use of library resources is minimal. The Library may wish to revisit this understanding as the assessment continues.

Allison McKinney (agrindly) (12/04/23 2:50 pm): Administratively approved.

Key: 1115

#### CURRENT

## **CPA Pathways, CERT (online)**

#### **Graduation Requirements**

Minimum Cumulative GPA: 2.75

#### Minimum hours required for certificate completion: 12 hours

Students who have successfully completed the CPA Pathways certificate may use the certific

- 12 hours of elective coursework requirements of the iMBA degree program
- 12 hours of elective coursework requirements of the iMSM degree program
- 12 hours of elective coursework requirements of the iMSA degree program

Course List		
Code	Title	Hours
Required		
ACCY 569	Data Driven Decisions in Accounting	2
ACCY 576	Data Preparation for Accounting	2
At least o	ne of the following:	
ACCY 504	•	2 or 4
ACCY 506	Advanced Topics in Accounting	4
ACCY 507	Taxation of Business Entities	2 or 4
ACCY 516	Professional Responsibility and Ethics for Accountants	3 or 4
ACCY 517	Financial Statement Analysis and Valuation	2 or 4
Select 4 h	nours from the list below:	
ACCY 577	Machine Learning for Accounting	2
ACCY 578	Accounting Analytics Applications	1
BADM 40 3	Corporate & Commercial Law	4
MBA 563	Data Toolkit: Business Data Modeling & Predictive Analytics	4
MBA 564	Data Analytics Applications in Business	2
MBA 565	Infonomics	4
Total Ho	urs	12

#### REVISED

## **CPA Pathways, CERT (online)**

**Graduation Requirements** 

Minimum Cumulative GPA: 2.75

#### Minimum hours required for certificate completion: 12 hours

Students who have successfully completed the CPA Pathways certificate may use the certific

- 12 hours of elective coursework requirements of the iMBA degree program
- 12 hours of elective coursework requirements of the iMSM degree program
- 12 hours of elective coursework requirements of the iMSA degree program

Course List		
Code	Title	Hours
Required		
ACCY 569	Data Driven Decisions in Accounting	2
ACCY 576	Data Preparation for Accounting	2
Select at	least 2 credit hours from the following list:□	
ACCY 504	Auditing	2 or 4
ACCY 506	Advanced Topics in Accounting	4
ACCY 507	Taxation of Business Entities	2 or 4
ACCY 516	Professional Responsibility and Ethics for Accountants	3 or 4
ACCY 517	Financial Statement Analysis and Valuation	2 or 4
Select the	e balance of 12 credit hours from the list above or the list	st below:
ACCY 577	Machine Learning for Accounting	2
ACCY 578	Accounting Analytics Applications	1
BADM 40	Corporate & Commercial Law	4
3	·	
MBA 563	Data Toolkit: Business Data Modeling & Predictive Analytics	4
MBA 564	Data Analytics Applications in Business	2
MBA 565	Infonomics	4
Total Ho	urs	12

Date Submitted: 08/08/23 10:34 am

Viewing: 10KS0155MUP & 10KU0385JD

: JP: Urban Planning, MUP & Law, JD

Last approved: 12/13/22 4:07 pm

Last edit: 01/09/24 8:08 am Changes proposed by: Nicole Turner

Urban Planning, MUP & Law, JD

Catalog Pages Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1733 Committee Chair
- 3. 1733 Head
- 4. KR Dean
- 5. University
  Librarian
- 6. Grad\_College
- 7. COTE Programs
- 8. KU Dean
- 9. KR Dean
- 10. Grad\_College
- 11. Provost

#### 12. Senate EPC

- 13. Senate
- 14. U Senate Conf
- 15. Board of Trustees
- 16. IBHE
- 17. HLC
- 18. DOE
- 19. DMI

## Approval Path

- 1. 08/15/23 5:34 pm Donna Butler (dbutler):
  - Approved for U Program Review
- 2. 08/21/23 11:55 am

Mary Margaret

Edwards

(mmedward):

Approved for 1733

Committee Chair

3. 08/21/23 11:58

am

Mark Doussard

(mdouss1):

Approved for 1733

Head

4. 09/22/23 11:32 Nicole Turner (nicturn): Approved for KR Dean 5. 10/12/23 6:03 am Claire Stewart (clairest): Approved for University Librarian 6. 11/02/23 12:58 pm Allison McKinney (agrindly): Approved for Grad\_College 7. 11/02/23 1:27 pm Suzanne Lee (suzannel): Approved for **COTE Programs** 8. 11/05/23 7:42 pm Verity Winship (vwinship): Approved for KU Dean 9. 12/01/23 8:52 am Nicole Turner (nicturn): Approved for KR Dean 10. 12/13/23 10:20 am Allison McKinney (agrindly): Approved for Grad\_College 11. 12/14/23 3:27 pm Brooke Newell (bsnewell): Approved for Provost

## History

1. Dec 13, 2022 by

Joint Program (ex. Master of Public Health & PhD. in Community Health)

This proposal is

for a:

Revision

#### Administration Details

Official Program

JP: Urban Planning, MUP & Law, JD

Name

Diploma Title

Sponsor College Fine & Applied Arts

Sponsor

**Urban & Regional Planning** 

Department

Sponsor Name <u>Marc Doussard</u>

Sponsor Email <u>mdouss1@illinois.edu</u>

College Contact Nicole Turner College Contact

**Email** 

nicturn@illinois.edu

College Budget

**Greg Anderson** 

Officer

College Budget

gnanders@illinois.edu

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

KR Dean

Does this program have inter-departmental administration?

Yes

Interdisciplinary Colleges and Departments (list other colleges/departments which are involved other than the sponsor chose above)

Please describe the oversight/governance for this program, e.g., traditional departmental/college governance. Inclusion of/roles of elected faculty committees? Inclusion of/roles of any advisory committees.

College Law

Department Law

Is there an additional department involved in governance?

No

## Proposal Title

Effective Catalog Fall 2023

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Joint Program in the Master of Urban Planning in Urban Planning and the Juris Doctorate in Law in the College of Fine and Applied Arts and the College of Law and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This JP: MUP and JD proposal (key 1091) is related to JP proposals for: MUP and MARCH (key 1084), MUP and MLA (key 1087), MUP and MPH (key 1056), MUP and related majors (key 1092), and MUP (key 454).

## **Program Justification**

Provide a brief description of what changes are being made to the program.

Copying degree requirements and learning outcomes from MUP and JD distinct program pages and bringing them into the Joint Program program page. Embedding newly revised MUP requirements into this joint program. Created joint program degree table and minimum hours tables to align with all MUP joint programs.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

<u>No</u>

Why are these changes necessary?

- 1. To align with Graduate College and Office of the Provost expectations for transparency for joint programs.
- 2. To keep joint program consistent with the regular program.
- 3. New content in joint program degree table include: Enrollment in each program at least 2 semesters and MUP minimum 500-level hours, consistent with other MUP joint programs. New content in minimum hours table includes how the MUP is reduced from 64 to 32 hours.

## 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 this new program/proposed change result in the replacement of another program?

No

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

No

## Program Regulation and Assessment

## Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

#### MASTER OF URBAN PLANNING

To be consistent with our accreditation requirements, we are using the Knowledge, Skills, and Values identified by the Planning Accreditation Board (PAB) as desired outcomes for planning education.

#### A.1. General planning knowledge:

Purpose and Meaning of Planning:

Planning Theory:

Planning Law:

<u>Human Settlements and History of Planning:</u>

The Future:

**Global Dimensions of Planning:** 

A.2. Planning skills:

Research Written, Oral and Graphic Communication:

**Quantitative and Qualitative Methods:** 

<u>Plan Creation and Implementation: is able to use Planning Process Methods:</u>

Leadership:

A.3. Values and ethics

<u>Professional Ethics and Responsibility:</u>

**Governance and Participation:** 

Sustainability and Environmental Quality:

**Growth and Development:** Social Justice:

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JURIS DOCTORATE IN LAW

<u>Demonstrate basic knowledge of American substantive and procedural law.</u> <u>This requires:</u>

The foundational rules governing liability for civil and criminal wrongdoing.

The foundational rules that regulate the transaction of business among individuals and the ownership of property.

The constitutional rules that shape the American legal system.

The procedural rules that govern court adjudication.

Several advanced areas of substantive or procedural law or both.

<u>Use legal reasoning and legal analysis in advising and representing clients.</u> <u>This requires:</u>

The ability to identify, formulate, and apply legal rules.

The ability to read and analyze judicial opinions.

The ability to parse and interpret statutes, regulations, contracts, and other similar legal texts.

The ability to construct legal arguments and evaluate critically one's own and others' legal arguments.

The ability to identify and evaluate the practical consequences of various legal rules and to formulate policy arguments for and against those rules.

<u>Bring practical legal skills to bear in resolving clients' legal problems.</u> <u>This requires:</u> The ability to write clearly and effectively in a wide range of legal contexts and for

various audiences, including courts, clients, and opposing counsel.

The ability to articulate one's thoughts verbally in a clear and effective manner. Knowledge of and ability to use tools of legal research.

The ability to identify and gather factual information relevant to the application of legal rules.

The ability to work collaboratively with others, including others with opposing interests.

Knowledge and understanding of practical aspects of the legal profession and market for legal services.

<u>Conduct himself or herself professionally and in keeping with the highest standards of civic virtue.</u> This requires:

Knowledge and appreciation of the ethical rules governing legal practice.

The ability to learn and grow professionally through self-reflection and continuing education.

An understanding of the lawyer's distinctive role in society and of the lawyer's concomitant responsibility to contribute to society through public service and pro bono representation.

The self-awareness and empathy necessary to understand and be understood across various social, economic, cultural, political, national, racial, gender, and ethnic backgrounds.

Describe how, when, and where these learning outcomes will be assessed.

#### Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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

## 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/PublicAdminRules2017.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.

Revised programs Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

#### Catalog Page Text - Overview Tab

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

<u>For additional details and requirements refer to the department's Programs of Study</u> and the Graduate College Handbook.

Statement for
Programs of
Study Catalog

#### Master of Urban Planning in Urban Planning

Course List	
Code Title	Hours
<u>UP 501Planning History and Theory</u>	<u>4</u>
<u>UP 503Physical Planning</u>	<u>4</u>
<u>UP 504Urban History and Theory</u>	<u>4</u>
<u>UP 505Urban and Regional Analysis</u>	<u>2</u>
<u>UP 510Plan Making</u>	<u>4</u>
<u>UP 511Law and Planning</u>	<u>4</u>
UP 590Professional Internship (reduces the hours needed to graduate by 4)	<u>0</u>
Recommended concentration/electives	<u>32</u>
Non-Thesis Option	
UP 591Capstone Seminar (enrollment required for 0 hours one term & 4 hours on	<u>e 4</u>
<u>term)</u>	
UP 598Master's Project (min/max applied toward degree)	<u>4</u>
Thesis Option	
UP 591Capstone Seminar (enrollment required for two semesters)	<u>0</u>
UP 599Thesis Research (min/max applied toward degree)	<u>8</u>
<u>Total Hours</u>	<u>64</u>

## Juris Doctorate in Law

_			
Cou	rce	ш	ıct

Code	Title	Hours
LAW 601	<u>Contracts</u>	<u>4</u>
LAW 602	<u>Property</u>	<u>4</u>
LAW 603	<u>Torts</u>	<u>4</u>
LAW 604	<u>Criminal Law</u>	<u>4</u>
LAW 606	Constitutional Law I	<u>4</u>
LAW 607	<u>Civil Procedure</u>	<u>4</u>
LAW 609	Legal Writing & Analysis	<u>2</u>
<u>LAW 610</u>	Introduction to Advocacy	<u>3</u>
LAW 627	<u>Legal Research</u>	<u>1</u>
LAW 792	Current Legal Problems (Fundamentals of Legal Practice)	<u>1</u>
Professional Respo	nsibility Requirement courses:	<u>2-3</u>
LAW 680	Professional Responsibility	

Experiential Credit Requirement

Law.

<u>6</u>

<u>Courses fulfilling the Experiential Credit requirement vary with section offerings. Please consult Course Counseling Handbook or Registration Guide for more information.</u>

Please consult the Registration Guide each semester for other courses approved by the College of

**Upper-Level Writing Requirement** 

Code Title Hours This requirement may only be satisfied after the student successfully completes the first-year legal writing curriculum (Legal Research, Legal Writing & Analysis, and Introduction to Advocacy). Please consult the Academic Policy Handbook for more information. Juris Doctorate in Law Credit Hour Limits **Grad Other Degree Requirements** Requirement Description Experiential and Upper Level Writing courses may not double count in requirements Regularly Scheduled Credit Hours. Please consult the Course Counseling Handbook for more 64 information. Maximum Externship Credit Hours 9 Maximum Credit Hours allowed in a semester <u>18</u> Maximum hours offered by the College of Law not on the UIUC campus 16 Maximum Study Abroad/International Credit 30 Grad Other Degree Requirements Requirement Description No pending I or DFR grades

Other Juris Doctorate in Law Graduation Requirements

Minimum months to graduation 24

Maximum months to graduation84

Minimum CGPA 2.33

#### Other Requirements for Joint Juris Doctorate in Law and MUP degrees

**Grad Other Degree Requirements** 

Requirement Description

Enrollment in each program at least 2 semesters

Minimum 500-level hours required overall for MUP16 (12 in UP)

Minimum MUP GPA 3.0

Course List

Code Title Hours 122 **Total Minimum Hours** Juris Doctorate in Law 90 32 Master of Urban Planning

Recommended concentration/electives (32 hours of the 64 required for MUP) may be met with law courses

Candidates admitted to the joint Master of Urban Planning and Juris Doctor must complete a minimum of 32 hours in urban planning, including core courses and capstone, plus the requirements of the lawdegree.

## **Program Relationships**

Identify the

existing programs

to be joined:

Corresponding Program(s)

Urban Planning, MUP

Law, JD

## **Program Features**

Academic Level Graduate

Professional

What is the typical time to completion of this program?

4 years

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

122

What is the

3.0

required GPA?

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

## Delivery Method

This program is

available:

On Campus - Students are required to be on campus, they may take some online courses.

## Admission Requirements

**Desired Effective** 

**Admissions Term** 

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

<u>No</u>

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

No impact

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

What is the Fall

matriculation

term for this program?

## Budget

Are there

No

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget

Information

Attach File(s)

#### Financial Resources

How does the unit intend to financially support this proposal?

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

No

Attach letters of

support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

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

No

Is this program requesting self-supporting status?

No

## Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

No impact

## Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Library collections, resources and services are sufficient to support this JD and MUP joint program revision.

#### **EP** Documentation

**EP Control** 

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

No

requires HLC

inquiry

#### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook

NONE: Urbn Plng(MUP)/JD-UIUC (10KS8103NONE)

Name

Program Code: 10KS0155MUP & 10KU0385JD

MinorConcDegreeMajorCodeCodeCodeCode

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

**DOE** Approval

Date

Effective Date:

Attached

Document
Justification for
this request

Program Reviewer Comments

Mary Lowry (lowry) (07/31/23 4:49 pm): Rollback: Please see email dated 7-31-23

Allison McKinney (agrindly) (11/02/23 12:58 pm): Administratively approved by the Grad College.

Emily Stuby (eastuby) (11/02/23 3:11 pm): Updated workflow to include KU dean.

Key: 1091

Date Submitted: 10/17/23 11:02 am

Viewing: 1PKS0133MENG &

# 1PKS0133MENU: Mechanical

# **Engineering, MEng <u>(on campus & online)</u>**

Last approved: 03/11/22 3:02 pm

Last edit: 01/09/24 8:09 am

Changes proposed by: Keri Pipkins

Mechanical Engineering, MENG

Catalog Pages Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1917 Head
- 3. KP Committee Chair
- 4. KP Dean
- 5. University Librarian
- 6. Grad\_College
- 7. COTE Programs
- 8. Provost

#### 9. Senate EPC

- 10. Senate
- 11. U Senate Conf
- 12. Board of Trustees
- 13. IBHE
- 14. HLC
- 15. DOE
- 16. DMI

## Approval Path

- 1. 10/20/23 3:37 pm Emily Stuby (eastuby): Approved for U Program Review
- 2. 10/31/23 1:28 pm Anthony Jacobi (ajacobi): Approved for 1917 Head
- 3. 11/10/23 9:39 am Keri Pipkins (kcp): Approved for KP Committee Chair
- 4. 11/10/23 9:40 am
  Michael Stoller
  (stoller4):
  Approved for KP
  Dean
- 5. 11/26/23 11:38 am Claire Stewart

(clairest):
Approved for
University
Librarian

- 6. 12/13/23 4:24 pm Allison McKinney (agrindly): Approved for Grad\_College
- 7. 12/13/23 6:45 pm Suzanne Lee (suzannel): Approved for COTE Programs
- 8. 12/14/23 3:27 pm Brooke Newell (bsnewell): Approved for Provost

## History

- 1. May 9, 2019 by Deb Forgacs (dforgacs)
- 2. Mar 11, 2022 by Mary Lowry (lowry)

Major (ex. Special Education)

This proposal is

for a: Revision

#### Administration Details

Official Program

Name

Mechanical Engineering, MEng (on campus & online)

Diploma Title

Sponsor College Grainger College of Engineering

Sponsor

Mechanical Sci & Engineering

Department

Sponsor Name <u>Tony Jacobi Mary Lowry</u>

Sponsor Email <u>a-jacobi@illinois.edu</u> <u>lowry@illinois.edu</u>

College Contact Keri Pipkins Mary Lowry College Contact

Email <u>kcp@illinois.edu</u> <del>lowry@illinois.edu</del>

College Budget

Tessa Hile

Officer

College Budget

tmhile@illinois.edu

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Susan Roughton, roughton@illinois.edu; Keri Pipkins

Does this program have inter-departmental administration?

No

## Proposal Title

Effective Catalog

Fall 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Master of Engineering in Mechanical Engineering in the Grainger College of Engineering and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

No

## **Program Justification**

Provide a brief description of what changes are being made to the program.

The MEng.ME degree has been offered since 2014, and has never been revised. The following revisions are proposed in order to provide clarity and transparency as well as align the degree requirements with the needs of industry partners.

- 1.) Created a sub-heading "Technical Core" to encompass the ME or TAM course work.
- 2.) Removed the Applied Math/Computational Science requirement, and increased the minimum credit hours of ME and TAM coursework from 12 to 16 and maximum from 20 to 24.
- 3.) Moved the Professional Development Requirement up in the Program of Study to above the Elective requirement section. Added the word "Coursework" to the heading.

- 4.) Explicitly listed the courses approved to count toward the professional development requirement in the Degree Requirements Table, replacing a broad statement that provided only one example. A letter from TEC is provided, supporting the inclusion of the TE courses that are listed as options.
- 5.) Edited the statement requiring a minimum of 4 credit hours to be taken outside of the major department to "outside the ME rubric". Also, moved this statement from "Other Requirements and Conditions" to under the Elective Coursework section.
- 6.) Deleted statements from Other Conditions and Requirements (1) "Elective course category may include a maximum of 4 hours of special topics credit" and (2) "Professional development category may include a maximum of 4 hours of special topics credit."
- 7.) Added Requirement: "No credit given towards degree for S/U or CR/NC graded classes."
- 8.) Deleted statement "Requirements and conditions may overlap." and added (may overlap) next to the the other requirements and conditions heading.
- 9.) Delivery Method responses and program code information added to correct an administrative mistake.
- 10.) The typical time to completion was changed from 2 years to 5 years. When this program was migrated to CIM-P that question was left blank. It was edited administratively to 2 years by Mary Lowry in 2022.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

<u>No</u>

Why are these changes necessary?

- 1.) Subheadings were created to provide better organization & clarity of requirements. The ME and TAM coursework make up the Technical Core of the degree requirements.
- 2.) This requirement includes limited course options that were found not to add value to the degree program or improve student outcomes. By removing this requirement students will be able to take another course that aligns with their focus area. Applied math and computational science concepts are included in courses throughout the departmental and college courses offerings. Since 4 credit hours of Applied Math/Computational Science coursework is being removed 4 credit hours were added to the Core Coursework (formerly ME and TAM courses) requirement.
- 3.) To align with the the organization and phrasing of other M.Eng. programs of study.
- 4.) To update the list of courses that meet this requirement. When the program was proposed, only one course was listed along with a general description of the type of courses that may be approved. Since then, ENG 572 and 573 were revised to be available to students in multiple M.Eng. programs, and new TE courses have been developed.
- 5.) The Program Director wants to allow TAM courses to count towards this requirement, and TAM courses are not outside the department. This increases the course options available to students. The statement was moved so that it more appropriately was listed in the Elective requirement section.
- 6.) The program sponsors were unsure why these conditions were in place, and did not want to limit students' access to courses in new & emerging topics.
- 7.) This has been an unofficial departmental policy for years. This revision allows the policy to be enforceable.
- 8.) To be more consistent with how other Programs of Study in GCOE are organized.
- 9.) This program was approved to be offered online in 2016, but the Delivery Method and program code information was never updated. So that will be done in this revision.
- 10.) We changed the time to completion to five years to accommodate students in the online program, the majority of whom are part-time students. Students in the oncampus program typically complete the program in 3 semesters.

#### 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 this new program/proposed change result in the replacement of another program?

No

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

Yes

Courses outside

of the sponsoring

department/interdisciplinary

departments

TE 401 - Develop Breakthrough Projects

TE 450 - Startups: Inc, Fund, Contracts, IP

TE 460 - Lect in Engrg Entrepreneurship

TE 461 - Technology Entrepreneurship

TE 466 - High-Tech Venture Marketing

TE 498 - Special Topics III

TE 510 - Advanced Creativity

TE 565 - Technol Innovation & Strategy

TE 566 - Finance for Engineering Mgmt

TE 567 - Venture Funded Startups

TE 598 - Special Topics IV

Please attach any

FW\_ TEC letter of support.pdf

letters of

support/acknowledgement

for any

Instructional

Resources

consider faculty,

students, and/or

other impacted

units as

appropriate.

## Program Regulation and Assessment

## Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

- The ability of students to function as independent scientists and engineers.
- A deep understanding of the underlying principles of the appropriate theories in their subject area.
- A deep understanding of the underlying principles of the synthesis and preparation of their subject materials.
- A deep understanding of the underlying principles of characterization of their subject materials.
- A deep understanding of the underlying principles of processing of their subject materials.
- A deep understanding of interrelationships of structure, processing and properties of their subject materials.
- A broad knowledge of the preparation, characterization and processing of all types of materials.

Describe how, when, and where these learning outcomes will be assessed.

#### Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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/PublicAdminRules2017.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.

Revised programs <u>MEngME Side by Side Final.pdf</u>
Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

Statement for Programs of Study Catalog

#### **Degree Requirements Other Requirements**

Course List

	30d, 30 E.30	
Code	Title	Hours
ME or TAM course work		<del>12-20</del>
Applied math/computationa	I science requirement (choose from approved list)	<del>3-4</del>
Elective courses chosen in o	onsultation with advisor	<del>4-8</del>
Professional development		4-8
Technical Core		<u>16-24</u>
ME and TAM coursework	selected in consultation with advisor.	
Professional Development C	<u>Soursework</u>	<u>4-8</u>
Select from the following:		
ENG 572	<u>Professional Practicum</u>	
ENG 573	<u>Capstone Project</u>	
ME 597	Independent Study	
TE 401, TE 450, TE 460,	TE 461, TE 466, TE 498, TE 510, TE 565, TE 566,	
<u>TE 567, TE 598</u>		
Elective Coursework		<u>4-12</u>
A minimum of 4 elective	hours must be completed outside the ME rubric.	
Total required hours		32

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

**Grad Other Degree Requirements** 

Requirement Description

A minimum of 4 elective hours must be completed outside of the major department.

A minimum of 12 500-level credit hours applied toward the degree, 8 of which must be in ME or TAM.

A maximum of 4 hours of independent study may be applied toward degree requirements.

Elective course category may include a maximum of 4 hours of special topics credit.

Professional development category may include a maximum of 4 hours of special topics credit.

No credit given towards degree for S/U or CR/NC graded classes.

The minimum program GPA is 3.0.

Requirements and conditions may overlap.

Corresponding

MENG Master of Engineering

Degree

## Program Features

Academic Level Graduate

Does this major

Yes No

have transcripted concentrations?

Will you admit to <u>No</u>

the concentration directly?

Is a concentration  $\underline{\text{No}}$ 

required for graduation?

What is the typical time to completion of this program?

 $\underline{5}$  2 years

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

32

What is the 3.0

required GPA?

CIP Code 141901 - Mechanical Engineering.

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

## **Delivery Method**

This program is

available:

On Campus - Students are required to be on campus, they may take some online courses.

On Campus and Online - 2 program types. Students can receive the entire program either on campus or online. Students can choose to take courses in either modality.

Describe the use of this delivery method:

Students may complete the M.Eng.ME degree entirely online or entirely on-campus.

## Admission Requirements

Desired Effective Fall 2024

Admissions Term

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

<u>No</u>

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

The anticipated impact is an increased retention rate and improvement in overall performance, due to limited course options to complete this the math/computational requirement and the difficulty of those limited options.

Estimated Annual Number of Degrees Awarded

Year One Estimate 5th Year Estimate (or when

fully implemented)

What is the

matriculation term for this program? Fall

## Budget

Are there No

budgetary

implications for this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget

Information

Attach File(s)

#### Financial Resources

How does the unit intend to financially support this proposal?

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

No

Attach letters of

support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

**Engineering Differential** 

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

Yes

If yes, briefly explain what tuition change you will make for this program, e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

Because the program is a Grainger Engineering Graduate Degree. All graduate programs in Grainger Engineering charge the the Grad Engineering On Campus Programs or Grad Engineering Online Programs rates (with the exception of a few programs that charge a BOT approved program specific rate).

Is this program requesting self-supporting status?

Yes No

## Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

This program revision does not impact the the numbers of faculty, class size, teaching loads, or student-faculty ratios.

## Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Library collections, resources and services are sufficient to support this program.

#### **EP** Documentation

**EP Control** 

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

No

requires HLC

inquiry

## **DMI** Documentation

Attach Final

Approval Notices

Banner/Codebook

MENG:Mechanical Enginerng-UIUC & MENG:Mech Engineering Onl-UIUC

Name

Program Code: 1PKS0133MENG <u>& 1PKS0133MENU</u>

Minor Conc Degree MENGR Major Code Code Code Code

0133

Senate Approval
Date

Senate
Conference
Approval Date

BOT Approval
Date

IBHE Approval
Date

HLC Approval

Date

**DOE Approval** 

Date

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer Comments Mary Lowry (lowry) (09/25/23 4:34 pm): Rollback: Please see email dated 9-25-23

**Brooke Newell (bsnewell) (09/29/23 2:03 pm):** Rollback: Letter of support missing from TE. Please include and once workflow is started, we can review the program revisions.

Brooke Newell (bsnewell) (10/06/23 7:37 pm): Rollback: per request Mary Lowry (lowry) (10/16/23 11:56 am): Rollback: Please see email dated 10-16-23

Key: 390

From: Roughton, Susan Joy

To: Carter Pipkins, Keri; Lowry, Mary K
Cc: Miller, Laura; Taylor, Jed L
Subject: FW: TEC letter of support

**Date:** Thursday, September 28, 2023 9:38:37 AM

Attachments: <u>image001.pnq</u>

Dear Keri and Mary,

Please see below email from Jed Taylor, of TEC. Will this email be sufficient for our application for curriculum changes to the MEngME program?

Thank you,

Susan

#### Susan Roughton, MA

**MEngME** Program Coordinator

Department of Mechanical Science and Engineering (MechSE)

University of Illinois at Urbana-Champaign

E-mail: roughton@illinois.edu

Phone: 217-300-3319

Lu MEB, Room 2024, 1206 W. Green Street, Urbana, IL 61801



Grainger College of Engineering

From: Taylor, Jed L <jedt@illinois.edu>

**Sent:** Monday, September 25, 2023 2:10 PM **To:** Roughton, Susan Joy <roughton@illinois.edu>

Cc: Miller, Laura <arriola@illinois.edu>

Subject: TEC letter of support

Dear Susan,

The Technology Entrepreneur Center is supportive of the proposal to add the following courses to the Mechanical Engineering, MEng. We can provide access to your estimated 30-40 students per term, subject to capacity and course availability.

- TE 401 Developing Breakthrough Projects
- TE 450 Startups: Incorporation, Funding, Contracts, & Intellectual Property
- TE 460 Lectures in Engineering Entrepreneurship
- TE 461 Technology Entrepreneurship
- TE 466 High-Tech Venture Marketing
- TE 498 Special Topics

- TE 510 Advanced Creativity
- TE 565 Technology, Innovation, & Strategy
- TE 566 Finance for Engineering Management
- TE 567 Venture Funded Startups
- TE 598 Special Topics

Thank you, Jed Taylor

#### JED TAYLOR

Assistant Dean, Innovation and Entrepreneurship

The Grainger College of Engineering | <u>Technology Entrepreneur Center</u> 352 Coordinated Science Lab | 1308 W. Main St. | MC 228 Urbana, IL 61801 | 217.244.4035 | <u>jedt@illinois.edu</u>

Instructions: Highlight the cells that include revisions to illustrate, specifically the revisions proposed. Highlight cells. Use red text on the left side (Current Program of Study) for content that will be deleted or edited. Use green text on the right for proposed revisions to text and any new requirements.

Mechanical Engineering, M.Eng.	
or the degree of Master of Engineering in Mechanical Engineering (on campus & online)	
For additional details and requirements, please refer to the department's Graduate Degree Requirements Handbook and the College Handbook.	Graduat
ME or TAM course work	12-20
Applied math/computational science requirement (choose from approved list)	3-4
	3-4
Applied math/computational science requirement (choose from approved list)  Elective courses chosen in consultation with advisor	

Total Required Hours	32
Other Requirements and Conditions	
A minimum of 4 elective hours must be completed outside of the major department.	
A minimum of 12 500-level credit hours applied toward the degree, 8 of which must be in ME or TAM.	
Elective course category may include a maximum of 4 hours of special topics credit.	
A maximum of 4 hours of independent study may be applied toward degree requirements.	
Professional development category may include a maximum of 4 hours of special topics credit.	
The minimum program GPA is 3.0.	
Requirements and conditions may overlap.	

Red Text: Deleted

Proposed Revisions	
Mechanical Engineering, M,Eng.	
or the degree of Master of Engineering in Mechanical Engineering (on campus & online)	
or additional details and requirements, please refer to the department's Graduate Degree Requirements Handbook and the follege Handbook.	Graduate
echnical Core	16-24
ME and TAM coursework selected from one or more tracks of study: Design & Mechanics, Controls & Robotics, Energy, Manufacturing, Fluid & Thermal Sciences, and Biomechanics.	
rofessional Development Coursework	4-8
elect from the following:	
NG 572 Professional Practicum	
NG 573 Capstone Project	
7E 597 Independent Study	
E 401, TE 450, TE 460, TE 461, TE 466, TE 498, TE 510, TE 565, TE 566, TE 567, TE 598	
lective Coursework	4-12
minimum of 4 elective hours must be completed outside the ME rubric.	
otal Required Hours	32
Other Requirements and Conditions (may overlap)	
n minimum of 12 500-level credit hours applied toward the degree, 8 of which must be in ME or TAM.	
maximum of 4 hours of independent study may be applied toward degree requirements.	
lo credit given towards degree for S/U or CR/NC graded classes	
he minimum program GPA is 3.0	

Green Text: Added

Date Submitted: 02/13/23 2:32 pm

Viewing: 1PKS5982MENG: Engineering:

## **Autonomy and Robotics, MEng**

Last approved: 05/05/22 11:57 am

Last edit: 01/09/24 8:09 am Changes proposed by: Amy McCullough

Engineering: Autonomy and Robotics, MEng

Catalog Pages Using this Program

Proposal Type:

#### In Workflow

- 1. U Program Review
- 2. 1227 Head
- 3. 1434 Head
- 4. 1933 Head
- 5. KP Committee Chair
- 6. KP Dean
- 7. University Librarian
- 8. Grad\_College
- 9. COTE Programs
- 10. Provost

#### 11. Senate EPC

- 12. Senate
- 13. U Senate Conf
- 14. Board of Trustees
- 15. IBHE
- 16. HLC
- 17. DOE
- 18. DMI

## **Approval Path**

- 1. 02/15/23 9:07 am
  Deb Forgacs
  (dforgacs):
  Approved for U
- Program Review
  2. 09/20/23 2:22 pm
  Keri Pipkins (kcp):
  Approved for 1227

Head

3. 09/20/23 3:42 pm Mahesh

Viswanathan

(vmahesh):

Rollback to 1227

Head for 1434

Head

4. 10/05/23 4:10 pm Keri Pipkins (kcp): Approved for 1227

Head 5. 10/11/23 7:21 pm Elsa Gunter (egunter): Approved for 1434 Head 6. 10/11/23 8:32 pm Erhan Kudeki (erhan): Approved for 1933 Head 7. 10/27/23 8:59 am Keri Pipkins (kcp): Approved for KP Committee Chair 8. 10/27/23 9:05 am Michael Stoller (stoller4): Approved for KP Dean 9. 11/06/23 6:19 pm Claire Stewart (clairest): Approved for University Librarian 10. 12/13/23 4:24 pm Allison McKinney (agrindly):

Approved for Grad\_College

11. 12/13/23 6:45 pm Suzanne Lee (suzannel): Approved for **COTE Programs** 

12. 12/14/23 3:27 pm Brooke Newell (bsnewell): Approved for Provost

## History

1. Apr 20, 2021 by Keri Pipkins (kcp)

2. May 5, 2022 by Keri Pipkins (kcp) Concentration (ex. Dietetics)

This proposal is

for a:

Revision

#### Administration Details

Official Program

Engineering: Autonomy and Robotics, MEng

Name

Diploma Title

Sponsor College Grainger College of Engineering

Sponsor

**Engineering Administration** 

Department

Sponsor Name Geir Dullerud

Sponsor Email dullerud@illinois.edu

College Contact Keri Pipkins College Contact

Email

kcp@illinois.edu

College Budget

Officer

College Budget

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Does this program have inter-departmental administration?

Yes

Interdisciplinary Colleges and Departments (list other colleges/departments which are involved other than the sponsor chose above)

Please describe the oversight/governance for this program, e.g., traditional departmental/college governance. Inclusion of/roles of elected faculty committees? Inclusion of/roles of any advisory committees.

The proposed Concentration in Autonomy and Robotics is a formal collaboration between five academic units (Aerospace Engineering, Computer Science, Electrical & Computer Engineering, Industrial & Enterprise Systems Engineering, and Mechanical Science and Engineering) and the Center for Autonomy (founded using Investment-for-Growth funds), all in The Grainger College of Engineering. Governance and oversight will be implemented through an Admissions Committee and a Curriculum Oversight Committee with representation from each of the five departments on both committees. Committee members will be asked to serve overlapping three year commitments.

#### Curriculum Oversight Committee

The Curriculum Oversight Committee will consist of no fewer than four faculty members, including the chair, from the participating departments (Aero, CS, ECE, ISE, MechSE). Each member should be from a distinct department unless the size of committee exceeds five members, or there are other mitigating factors. The director of the Center for Autonomy will select the chair of the committee in consultation with the associate directors. The committee chair, director and associate directors will select the remaining committee members. Appointments to the committee will occur in alternating years, with a two-year term of service. Representation on the committee will be solicited from all participating departments each year. The Curriculum Oversight Committee will meet once a semester to review course offerings for the upcoming semester to ensure that core courses, as well as an appropriate selection of elective courses, are offered each semester for students to successfully complete this program in three semesters. The committee will review and update the program curriculum requirements on an annual basis to ensure students are receiving the advanced knowledge and skills needed for industry positions in this field. Additionally, the committee will address any petitions or other course-related matters that arise during the running of the program on an ad hoc basis. Faculty that serve on this committee will be responsible for updating their home department on curriculum needs and future course plans for this concentration.

#### Admissions Committee

The Admissions Committee will consist of no fewer than four faculty members, including the chair, from the participating departments (Aero, CS, ECE, ISE, MechSE). Each member should be from a distinct department unless the size of committee exceeds five members, or there are other mitigating factors. The director of the Center for Autonomy will select the chair of the committee in consultation with the associate directors. The committee chair, director and associate directors will select the remaining committee members. Appointments to the committee will occur annually with a one-year term of service. Representation on the committee will be solicited from all participating departments each year. The Admissions Committee will be responsible for all admissions decisions for the program, and related adjudication. This committee will determine in advance the capacity for incoming students for each entering term with feedback from each of the participating departments. The committee will meet on a regular basis throughout the admission season for the Fall and Spring terms to review and admit applicants.

Engineering's Center for Professional and Executive Training and Education to provide administrative support for the program, including in support of student recruitment, career advising, and professional development. The Grainger College of Engineering Office of Graduate, Professional, and Online Programs will process all required paperwork for applicants and current students.

During the first three years the program cohorts will consist of 20-25 students. Therefore, advising will primarily be provided by the full-time Program Director. This will involve assisting students with choosing their courses, and dealing with other logistical academic matters that arise. The Director will also organize events to help acclimatize students to their new environment, and indeed continue leading such events throughout the program year; faculty involved with the program may also attend these events. For specific technical advice, students will be able to consult directly with faculty members who are involved with the program. The Director will also help direct students to appropriate University resources. For situations in which students require special support (for instance to deal with personal crises or challenges), the program will utilize the specially trained professional staff in the Office of the Associate Dean for Graduate, Professional and Online Programs.

College Grainger College of Engineering

Department Computer Science

Is there an additional department involved in governance?

Yes

College Grainger College of Engineering

Department Electrical and Computer Engineering

Is there an additional department involved in governance?

No

## Proposal Title

Effective Catalog Spring 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Concentration in Autonomy and Robotics in the Master of Engineering in Engineering in the Grainger College of Engineering and Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

## **Program Justification**

Provide a brief description of what changes are being made to the program.

- 1. Within the curriculum section "Other Requirements and Conditions" section of the curriculum, requesting to revise the requirement "A minimum of 12 500-level credit hours" to "A minimum of 12 500-level credit hours. ENG 572 and ENG 573 may not be used to satisfy this requirement."
- 2. Updated the list of electives. This list was included in the original proposals, but was never added to the catalog as intended. CIM-P was very new at the time & there was some confusion around how to list an elective table with a large number of courses). This revision puts the approved elective course list into the Program of Study section, removes 3 courses (one deactivated, 2 not currently taught), and lists cross-listed courses once.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

No

Why are these changes necessary?

- 1. ENG 572: Professional Practicum and ENG 573: Capstone Project are professional development courses. The professional development portion of the curriculum is not intended to be included in the 12 credit hours at the 500-level requirement.
- 2. This is not a change, it's correctly adding a table that was submitted previously as an attachment when proposal was originally approved, but not added to the catalog. CIM-P was new at the time & there was some confusion regarding how to add elective lists to the catalog (a separate CIM Form was created for electives at the time). All 5 participating departments were provided the elective list via pdf form and all submitted letters of support at the time. (See EP. 21.041, attached)

#### 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?

Nο

Does this new program/proposed change result in the replacement of another program?

No

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

Yes

Courses outside of the sponsoring department/interdisciplinary departments

ECE 484 - Principles of Safe Autonomy

CS 588 - Autonomous Vehicle System Eng ME 445 - Introduction to Robotics

Please attach any letters of support/acknowledgement for any Instructional Resources consider faculty, students, and/or other impacted units as appropriate.

## Program Regulation and Assessment

## Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

The learning objectives of the proposed Concentration in Autonomy and Robotics include professionally-oriented competence in the application of software systems, electronics, tools for algorithm design and machine learning, and physics-based dynamics, control and sensor systems to the integration of autonomy in robotic systems. The learning objectives will be assessed in the core coursework and through the performance of students in the capstone project professional-development course. Such assessment will be analyzed annually by the Curriculum Oversight Committee to ensure students are receiving the advanced knowledge and skills needed for industry positions in this field. Additional metrics include placement of graduates in relevant careers measured in exit surveys.

Describe how, when, and where these learning outcomes will be assessed.

#### Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements

#### Attach Documents

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

## 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/PublicAdminRules2017.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.

Revised programs <u>EP-21-04.pdf</u>
Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

associate dean for graduate, professional and online programs : <u>Daniel Bodony</u> Harry <u>Dankowicz</u>

overview of admissions & requirements: https://grainger.illinois.edu/academics/graduate

overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply

college website: https://grainger.illinois.edu/

address: 402 Engineering Hall, 1308 W Green St, Urbana, Illinois 61801

phone: (217) 244-2745 email: engr-gpp@illinois.edu

The Grainger College of Engineering offers a Master of Engineering (MEng) degree program for students whose primary intent is a professional career in industry or government. This degree differs from the Master of Science (MS) degree in that it is a professionally-oriented master's degree that is not a pathway to a doctoral program. The Major in Engineering for the M.Eng. degree requires the selection of an interdisciplinary concentration, which must be identified at the time of application. Available concentrations are:

Aerospace Systems Engineering Autonomy and Robotics Energy Systems Plasma Engineering Railway Engineering

#### Admission

Students with bachelor's or master's degrees in engineering or related sciences will be considered for admission if they have a grade point average of at least  $3.00 \, (A=4.00)$  for the last two years of undergraduate study. Admission is possible for the both the fall and spring semesters. Full details of admission requirements are on the Web page of the department offering the concentration.

All applicants whose native language is not English are required to submit TOEFL or International English Language Testing System (IELTS) scores as evidence of English proficiency. Minimum admission requirements are set by the Graduate College. Higher requirements may be imposed by specific concentrations. Financial Aid

Students in concentrations under the MEng in Engineering major are not eligible for Board of Trustees (BOT) tuition-waiver generating assistantships at the University of Illinois.

Statement for
Programs of
Study Catalog

#### Concentration Requirements

Course List

Code Title Hours
Core Coursework 12

ME 445 Introduction to Robotics

ECE 484 Principles of Safe Autonomy

CS 588 Autonomous Vehicle System Engineering

Select one of the following: 4

Control and Dynamics

ECE 486 Control Systems

SE 422 Robot Dynamics and Control

Optimization

AE 504 Optimal Aerospace Systems
ECE 490 Introduction to Optimization

Hardware Systems

ME 451 Computer-Aided Mfg Systems

Artificial Intelligence and Perception

CS 440 Artificial Intelligence
CS 543 Computer Vision

ECE 544 Topics in Signal Processing

Design and Applications

CS 465 User Interface Design

Professional Development Course 4

12

ENG 573 Capstone Project

ENG 572 Professional Practicum

Other advisor-approved courses.

Additional Coursework

Electives may be selected from the course list, with advisor approval. This list includes courses in Control and Dynamics, Optimization, Hardware Systems, Artificial Intelligence and Perception, Design and Applications.

Artificial Intelligence and Perception, Design and Applications.

Total Hours 32

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

**Grad Other Degree Requirements** 

Requirement Description

A minimum of 20 credit hours must be taken from the University of Illinois Urbana-Champaign campus.

#### A minimum of 12 500-level credit hours.

<u>A minimum of 12 500-level credit hours. ENG 572 and ENG 573 may not be used to satisfy this requirement.</u>

No courses used to fulfill any degree requirement may be taken using the "Credit/No Credit" option.

Minimum GPA: 3.0 **Elective Course List** 

Enrollment in these courses depends on course availability.

Course List

Code Title Hours

ARTIFICIAL INTELLIGENCE & PERCEPTION

Code	Title	Hours
CS 440/ECE 448	Artificial Intelligence	<u>3 or 4</u>
CS 446/ECE 449	Machine Learning	<u>3 or 4</u>
<u>CS 447</u>	Natural Language Processing	<u>3 or 4</u>
<u>CS 543</u>	Computer Vision	<u>4</u>
<u>CS 546</u>	Advanced Topics in Natural Language Processing	<u>4</u>
ECE 534	Random Processes	<u>4</u>
ECE 543	Statistical Learning Theory	4
ECE 561	Statistical Inference for Engineers and Data Scientis	
ECE 566	Computational Inference and Learning	<u>4</u>
<u>IE 534/CS 547</u>	Deep Learning	4
SE 524	Data-Based Systems Modeling	<u>4</u>
CONTROL & DYNAMICS		
AE 454	Systems Dynamics & Control	<u>4</u>
AE 554/TAM 516	Dynamical Systems Theory	<u>4</u>
AE 555/SE 521	Multivariable Control Design	<u>4</u>
AE 556	Robust Control	<del>=</del> 4
ECE 486	Control Systems	<del>=</del> 4
ECE 515/ME 540	Control System Theory & Design	<u>4</u> <u>4</u> <u>4</u>
ECE 517	Nonlinear & Adaptive Control	
	Analysis of Nonlinear Systems	<u>4</u> <u>4</u>
ECE 553	Optimum Control Systems	<u>4</u>
ECE 555	Control of Stochastic Systems	<u>4</u>
ECE 557	Geometric Control Theory	<u>4</u>
ECE 568	Model & Cntrl Electromech Syst	<u>4</u>
ECE 573	Power System Control	<u>=</u> <u>4</u>
ME 460	Industrial Control Systems	
ME 561	Convex Methods in Control	<u>4</u> <u>4</u>
ME 562	Robust Adaptive Control	<del>=</del> 4
	Robot Dynamics and Control	
SE 424	State Space Design for Control	<u>4</u> <u>3</u>
SE 525	Control of Complex Systems	<u>4</u>
TAM 412	Intermediate Dynamics	<u>4</u>
DESIGN & APPLICATIONS		=
<u>CS 465</u>		<u>4</u>
<u>CS 565</u>	Human-Computer Interaction	<u>4</u>
SE 400	Engineering Law	_ 3 or 4
HARDWARE SYSTEMS		
<u>CS 431</u>	Embedded Systems	3 or 4
ECE 437	Sensors and Instrumentation	<u>3</u>
ME 451	Computer-Aided Mfg Systems	= <u>3 or 4</u>
ME 452	Num Control of Mfg Processes	3 or 4
ME 455	Micromanufacturing Process & Automation	4
ME 461	Computer Cntrl of Mech Systems	<u>÷</u> 3 or 4
SE 420	Digital Control Systems	<u>4</u>
SE 423	Mechatronics	<u>=</u> <u>3</u>
<u>OPTIMIZATION</u>		=
AE 504	Optimal Aerospace Systems	<u>4</u>
		=

Code	Title	Hours
<u>CS 544</u>	Optimiz in Computer Vision	<u>4</u>
ECE 490	Introduction to Optimization	<u>4</u>
ECE 580	Optimiz by Vector Space Methds	<u>4</u>
<u>IE 411</u>	Optimization of Large Systems	<u>3 or 4</u>
<u>IE 519/CS 586</u>	Combinatorial Optimization	<u>4</u>
<u>IE 521</u>	Convex Optimization	<u>4</u>
SOFTWARE SYSTEMS		
<u>CS 424</u>	Real-Time Systems	<u>3 or 4</u>
CS 425/ECE 428	<u>Distributed Systems</u>	<u>3 or 4</u>
CS 427/CSE 426	Software Engineering I	<u>3 or 4</u>
CS 428/CSE 429	Software Engineering II	<u>3 or 4</u>
CS/ECE 438	Communication Networks	<u>3 or 4</u>
CS 461/ECE 422	Computer Security I	<u>4</u>
<u>CS 476</u>	Program Verification	<u>3 or 4</u>
CS 477/ECE 478/CSE 4	08Formal Software Development Methods	<u>3 or 4</u>
<u>CS 484</u>	<u>Parallel Programming</u>	<u>3 or 4</u>
ECE 408	Applied Parallel Programming	<u>4</u>

# Program Relationships

Corresponding

Program(s):

Corresponding Program(s)

Engineering, MEng

# Program Features

Academic Level Graduate

Is This a Teacher Certification Program?

IЛО

Will specialized accreditation be sought for this program?

No

Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)

During the first three years the program cohorts will consist of 20-25 students. Therefore, advising will primarily be provided by the full-time Program Director. This will involve assisting students with choosing their courses, and dealing with other logistical academic matters that arise. The Director will also organize events to help acclimatize students to their new environment, and indeed continue leading such events throughout the program year; faculty involved with the program may also attend these events. For specific technical advice, students will be able to consult directly with faculty members who are involved with the program. The Director will also help direct students to appropriate University resources. For situations in which students require special support (for instance to deal with personal crises or challenges), the program will utilize the specially trained professional staff in the Office of the Associate Dean for Graduate, Professional and Online Programs.

# **Delivery Method**

This program is

available:

On Campus - Students are required to be on campus, they may take some online courses.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

This revision will not impact enrollment and degrees awarded.

# Budget

Are there

No

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

Yes

Please

explain/describe:

A full-time Program Director will be hired to manage day-to-day operations and logistics for the MEng program. The Center for Autonomy will fund this position for the first two years. After that the program tuition revenue should be sufficient to cover this salary and other expenses associated with this position.

Additional Budget

Information

Attach File(s)

### Financial Resources

How does the unit intend to financially support this proposal?

The unit is requesting self-supporting program status for this degree. Students enrolled in this degree will pay tuition. The Grainger College of Engineering will use some of the graduate tuition dollars returned to the college from the Office of the Vice Provost for Budget and Resource Planning to provide the participating departments with resources needed to support the proposed curriculum. Graduate tuition funds returned to the college from campus are considered state, recurring funds that may be used to fund faculty and lecturer salaries, support instruction, or at the discretion of the participating Department Heads in a manner consistent with campus policy on use of such funds. Additional financial support will be provided in the first three years by the Center for Autonomy in The Grainger College of Engineering.

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

No

Attach letters of support

Is this program requesting self-supporting status?

Yes

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

There will be no impact to faculty resources or enrollment.

# Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Library collections, resources and services are sufficient to support this program.

### **EP Documentation**

EP Control

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

No

requires HLC

inquiry

# **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook MENG:Engr:AutonomyRobotic-UIUC

Name

Program Code: 1PKS5982MENG

Minor Conc 5982 Degree MENGR Major Code Code Code Code

1211

Senate Approval

Date

Senate Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

**DOE Approval** 

Date

Effective Date:

Attached

Document

Justification for

this request

Program Reviewer Mahesh Viswanathan (vmahesh) (09/20/23 3:42 pm): Rollback: per Keri's

Comments request on 2:25pm on 9/20

Key: 875

# : ENGINEERING: AUTONOMY AND ROBOTICS, MENG

### In Workflow

- 1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
- 2. 1227 Head (kcp@illinois.edu; bsnewell@illinois.edu; danko@illinois.edu; jmakela@illinois.edu)
- 3. 1434 Head (namato@illinois.edu; vmahesh@illinois.edu; egunter@illinois.edu)
- 4. 1933 Head (b-hajek@illinois.edu; oelze@illinois.edu; erhan@illinois.edu)
- 5. KP Committee Chair (mch@illinois.edu; bsnewell@illinois.edu; danko@illinois.edu; kcp@illinois.edu)
- 6. KP Dean (candyd@illinois.edu)
- 7. University Librarian (jpwilkin@illinois.edu)
- 8. Grad\_College (agrindly@illinois.edu; jch@illinois.edu; lowry@illinois.edu)
- 9. Provost (kmartens@illinois.edu)
- 10. Senate EPC (bjlehman@illinois.edu; moorhouz@illinois.edu; kmartens@illinois.edu)
- 11. Senate (jtempel@illinois.edu)
- 12. U Senate Conf (none)
- 13. Board of Trustees (none)
- 14. IBHE (none)
- 15. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

### **Approval Path**

- 1. Thu, 22 Oct 2020 21:17:48 GMT
  Deb Forgacs (dforgacs): Approved for U Program Review
- Fri, 23 Oct 2020 19:16:40 GMT Keri Pipkins (kcp): Approved for 1227 Head
- 3. Fri, 23 Oct 2020 23:15:08 GMT Elsa Gunter (egunter): Approved for 1434 Head
- Mon, 26 Oct 2020 13:40:27 GMT
   E Kudeki (erhan): Approved for 1933 Head
- Mon, 16 Nov 2020 18:10:55 GMT
   Keri Pipkins (kcp): Approved for KP Committee Chair
- 6. Thu, 19 Nov 2020 22:04:08 GMT Candy Deaville (candyd): Approved for KP Dean
- 7. Thu, 19 Nov 2020 23:25:56 GMT John Wilkin (jpwilkin): Approved for University Librarian
- Fri, 11 Dec 2020 20:48:51 GMT
   Allison McKinney (agrindly): Approved for Grad\_College
- Sun, 13 Dec 2020 23:26:26 GMT Kathy Martensen (kmartens): Approved for Provost

### **New Proposal**

Date Submitted: Wed, 21 Oct 2020 22:23:54 GMT

## Viewing:: Engineering: Autonomy and Robotics, MEng

Changes proposed by: Keri Pipkins

### **Proposal Type**

### **Proposal Type:**

Concentration (ex. Dietetics)

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
Establish a Graduate Concentration in Autonomy and Robotics within the Master of Engineering in Engineering Degree
EP Control Number
EP.21.041
Official Program Name
Engineering: Autonomy and Robotics, MEng
Effective Catalog Term
Fall 2021
Sponsor College
Grainger College of Engineering
Sponsor Department
Engineering Administration
Sponsor Name
Geir Dullerud
Sponsor Email
dullerud@illinois.edu
College Contact
Harry Dankowicz
College Contact Email
danko@illinois.edu
Program Description and Justification

The proposed Concentration in Autonomy and Robotics is a fast-paced, one-year, professionally-oriented curriculum that aims to provide students with solid foundational and operational knowledge in the integration of principles of autonomy and robotics across a wide range of enterprises—including,

Provide abriefdescription and justification of the program, including highlights of the program objectives, and the careers, occupations, or further

educational opportunities for which the program will prepare graduates, when appropriate.

Brief description:

for instance, the aerospace, automotive, medical, construction, and entertainment industries. Students will learn to work with components of software systems, electronics, tools for algorithm design and machine learning, and physics-based dynamics, control and sensor systems. The 16 credit hours of core coursework includes interdisciplinary project experiences that present key topics in the context of practical applications. An additional 12 credit hours of elective coursework allows students to further customize their degree by choosing from a rich set of courses from several relevant disciplinary domains. The 4 credit hours of professional development coursework provide a capstone focus on skills relevant for industry careers.

Engineering analysis and design of current and future autonomous systems requires a broad range of skills and knowledge that do not entirely fit into any one of the traditional engineering departments or computer science. In contrast, all students in this program of study will learn about the complexities of the software systems needed to run autonomous systems; the mathematics, control, and information theory behind algorithm design; the physics needed to model robots and mobile vehicles; and the technologies for making and modifying physical prototypes. Students will have the opportunity to further specialize and concentrate their knowledge in one or more of these areas to which all will be introduced and exposed. This combination of breath and depth will produce engineers able to contribute immediately to a specific area once employed, but will also put them in a unique position to pivot and learn other areas as required.

#### Justification:

A major technological revolution is underway in the areas of system automation and robotics, under the umbrella of autonomy. Applications include self-driving cars, delivery drones, remote and robotic surgical tools, micro-power grids, Internet-connected appliances, digital manufacturing equipment, and atmospheric control systems. This rapid transition requires engineers and computer scientists with cross-cutting training who can transform advances in digital hardware, communication networks, additive manufacturing, computational mechanics, and artificial intelligence into physical and information-system technologies. Although the US Bureau of Labor Statistics does not track robotics as a job category, the field draws employees from software engineering (21% projected growth from 2018-2028) and mechanical engineering (4% projected growth). At the start of 2020, Fior Markets projected that the global robotics market is expected to grow from USD 37.81 Billion in 2017 to USD 158.21 Billion by 2025 at a compound annual growth rate of 19.11%.

The proposed Concentration in Autonomy and Robotics aims to meet this critical need. It will position the University as a unique destination for prospective students interested in a professionally-oriented autonomy and robotics curriculum and will ensure our national leadership in education and research in every aspect of this rapidly growing field. It will also attract attention of employers from across the public, private, and non-government sectors who will be engaged as part of a deliberate effort to develop internship and career opportunities for program students and graduates. The proposed concentration is consistent with campus priorities that emphasize cooperation among multiple disciplines and that emphasize growth in the particular interdisciplinary area of autonomy and robotics, as evidenced by the creation of the Center for Autonomy in The Grainger College of Engineering. As an element of a revenue-generation strategy, the proposed concentration will provide resources for enhancing scholarship and educational opportunity.

Unique elements of the proposed curriculum relative to other disciplinary master's programs are opportunities for students to (i) work on complex autonomy testbeds that are not readily available in other master's programs; and (ii) to do so in multi-disciplinary project teams that integrate broad exposure to software, dynamics, control, electronics, and perception. These value-added features provide program graduates with a competitive advantage relative to those graduating from existing master's programs in robotics (e.g., at University of Michigan, University of Pennsylvania, and Carnegie Mellon University) when seeking employment in the rapidly expanding area of autonomy and robotics.

### Is this program interdisciplinary?

Yes

### Interdisciplinary Colleges and Departments (list other colleges/departments which are involved other than the sponsor chose above)

The proposed Concentration in Autonomy and Robotics is a formal collaboration between five academic units (Aerospace Engineering, Computer Science, Electrical & Computer Engineering, Industrial & Enterprise Systems Engineering, and Mechanical Science and Engineering) and the Center for Autonomy (founded using Investment-for-Growth funds), all in The Grainger College of Engineering. Governance and oversight will be implemented through an Admissions Committee and a Curriculum Oversight Committee with representation from each of the five departments on both committees. Committee members will be asked to serve overlapping three year commitments.

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The Curriculum Oversight Committee will consist of no fewer than four faculty members, including the chair, from the participating departments (Aero, CS, ECE, ISE, MechSE). Each member should be from a distinct department unless the size of committee exceeds five members, or there are other mitigating factors. The director of the Center for Autonomy will select the chair of the committee in consultation with the associate directors. The committee chair, director and associate directors will select the remaining committee members. Appointments to the committee will occur in alternating years, with a two-year term of service. Representation on the committee will be solicited from all participating departments each year. The Curriculum Oversight Committee will meet once a semester to review course offerings for the upcoming semester to ensure that core courses, as well as an appropriate selection of elective courses, are offered each semester for students to successfully complete this program in three semesters. The committee will review and update the program curriculum requirements on an annual basis to ensure students are receiving the advanced knowledge

and skills needed for industry positions in this field. Additionally, the committee will address any petitions or other course-related matters that arise during the running of the program on an ad hoc basis. Faculty that serve on this committee will be responsible for updating their home department on curriculum needs and future course plans for this concentration.

#### Admissions Committee

The Admissions Committee will consist of no fewer than four faculty members, including the chair, from the participating departments (Aero, CS, ECE, ISE, MechSE). Each member should be from a distinct department unless the size of committee exceeds five members, or there are other mitigating factors. The director of the Center for Autonomy will select the chair of the committee in consultation with the associate directors. The committee chair, director and associate directors will select the remaining committee members. Appointments to the committee will occur annually with a oneyear term of service. Representation on the committee will be solicited from all participating departments each year. The Admissions Committee will be responsible for all admissions decisions for the program, and related adjudication. This committee will determine in advance the capacity for incoming students for each entering term with feedback from each of the participating departments. The committee will meet on a regular basis throughout the admission season for the Fall and Spring terms to review and admit applicants.

The program will leverage the shared services for MEng programs in The Grainger College of Engineering's Center for Professional and Executive Training and Education to provide administrative support for the program, including in support of student recruitment, career advising, and professional development. The Grainger College of Engineering Office of Graduate, Professional, and Online Programs will process all required paperwork for applicants and current students.

During the first three years the program cohorts will consist of 20-25 students. Therefore, advising will primarily be provided by the full-time Program Director. This will involve assisting students with choosing their courses, and dealing with other logistical academic matters that arise. The Director

# will also organize events to help acclimatize students to their new environment, and indeed continue leading such events throughout the program year; faculty involved with the program may also attend these events. For specific technical advice, students will be able to consult directly with faculty members who are involved with the program. The Director will also help direct students to appropriate University resources. For situations in which students require special support (for instance to deal with personal crises or challenges), the program will utilize the specially trained professional staff in the Office of the Associate Dean for Graduate, Professional and Online Programs. College

**Grainger College of Engineering** 

### Department

Computer Science

Do you need to add an additional interdisciplinary relationship?

Yes

### College

**Grainger College of Engineering** 

#### Department

**Electrical and Computer Engineering** 

Do you need to add an additional interdisciplinary relationship?

No

Corresponding Program(s):
Corresponding Program(s)
Engineering, MEng
Academic Level
Graduate
Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)
During the first three years the program cohorts will consist of 20-25 students. Therefore, advising will primarily be provided by the full-time Program Director. This will involve assisting students with choosing their courses, and dealing with other logistical academic matters that arise. The Director will also organize events to help acclimatize students to their new environment, and indeed continue leading such events throughout the program year; faculty involved with the program may also attend these events. For specific technical advice, students will be able to consult directly with faculty members who are involved with the program. The Director will also help direct students to appropriate University resources. For situations in which students require special support (for instance to deal with personal crises or challenges), the program will utilize the specially trained professional staff in the Office of the Associate Dean for Graduate, Professional and Online Programs.
Is This a Teacher Certification Program?
No
Will specialized accreditation be sought for this program?
No
Enrollment
Number of Students in Program (estimate)
Year One Estimate
20
5th Year Estimate (or when fully implemented)
50
What is the typical time to completion of this program?  1 year
What are the minimum Total Credit Hours required for this program?
32

Delivery Method
This program is available:
On Campus
Budget
Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?
Yes
Please explain/describe:
A full-time Program Director will be hired to manage day-to-day operations and logistics for the MEng program. The Center for Autonomy will fund this position for the first two years. After that the program tuition revenue should be sufficient to cover this salary and other expenses associated with this position.
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** 

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc. Describe how the unit will support student advising, including job placement and/or admission to advanced studies.

The proposed core curriculum is built from courses currently taught (including as special topics classes) in the participating departments, along with electives chosen from courses offered by participating departments or other departments in The Grainger College of Engineering. There is no anticipated impact on faculty resources. The concentration is also strategically aligned with the expansion of The Grainger College of Engineering's footprint in research and education in autonomy and robotics as evidenced by the creation of the Center for Autonomy and by college-wide tenure-track hiring in this area.

Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

There will be minimal to no impact on the University Library's resources, collections, and services.

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?

Yes

### Required courses

ECE 484 - Principles of Safe Autonomy ME 445 - Introduction to Robotics CS 588 - Autonomous Vehicle System Eng

Explain how the inclusion or removal of the courses/subjects listed above impacts the offering departments.

The three departments offering required courses are among the five academic units (Aerospace Engineering, Computer Science, Electrical & Computer Engineering, Industrial & Enterprise Systems Engineering, and Mechanical Science and Engineering) formally collaborating with the Center for Autonomy in offering this concentration. Letters of support are attached. These departments will be compensated via agreed upon MOU's between the Center for Autonomy and each department.

### Attach letters of support from other departments.

CS-Letter-of-Support-MEng-Autonomy-Robotics\_2020-05-31.pdf
Nagi\_ISE Endorsement of MEng in Autonomy RN.pdf
Jacobi-MechSE endorsement-10172019.pdf
ISE\_MEng.pdf
Hajek-ECE.pdf
Freund-Aero.pdf

### **Financial Resources**

### How does the unit intend to financially support this proposal?

The unit is requesting self-supporting program status for this degree. Students enrolled in this degree will pay tuition. The Grainger College of Engineering will use some of the graduate tuition dollars returned to the college from the Office of the Vice Provost for Budget and Resource Planning to provide the participating departments with resources needed to support the proposed curriculum. Graduate tuition funds returned to the college from campus are considered state, recurring funds that may be used to fund faculty and lecturer salaries, support instruction, or at the discretion of the participating Department Heads in a manner consistent with campus policy on use of such funds. Additional financial support will be provided in the first three years by the Center for Autonomy in The Grainger College of Engineering.

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

No

Attach letters of support

MENG Autonomy and Robotics.pdf

Is this program requesting self-supporting status?

Yes

### **Program Regulation and Assessment**

Briefly describe the plan to assess and improve student learning, including the program's learning objectives; when, how, and where these learning objectives will be assessed; what metrics will be used to signify student's achievement of the stated learning objectives; and the process to ensure assessment results are used to improve student learning. (Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable).

The learning objectives of the proposed Concentration in Autonomy and Robotics include professionally-oriented competence in the application of software systems, electronics, tools for algorithm design and machine learning, and physics-based dynamics, control and sensor systems to the integration of autonomy in robotic systems. The learning objectives will be assessed in the core coursework and through the performance of students in the capstone project professional-development course. Such assessment will be analyzed annually by the Curriculum Oversight Committee to ensure students are receiving the advanced knowledge and skills needed for industry positions in this field. Additional metrics include placement of graduates in relevant careers measured in exit surveys.

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.

### For new programs, attach Program of Study

AcademicCatalog\_MEng\_AutonomyandRoboticsv4.pdf

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.

associate dean for graduate, professional and online programs: Harry Dankowicz

overview of admissions & requirements: https://grainger.illinois.edu/academics/graduate overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply

college website: https://grainger.illinois.edu/

address: 402 Engineering Hall, 1308 W Green St, Urbana, Illinois 61801

phone: (217) 244-2745 email: engr-gpp@illinois.edu

The Grainger College of Engineering offers a Master of Engineering (MEng) degree program for students whose primary intent is a professional career in industry or government. This degree differs from the Master of Science (MS) degree in that it is a professionally-oriented master's degree that is not a pathway to a doctoral program. The Major in Engineering for the M.Eng. degree requires the selection of an interdisciplinary concentration, which must be identified at the time of application. Available concentrations are:

Aerospace Systems Engineering Autonomy and Robotics Energy Systems Plasma Engineering Railway Engineering

#### Admission

Students with bachelor's or master's degrees in engineering or related sciences will be considered for admission if they have a grade point average of at least 3.00 (A = 4.00) for the last two years of undergraduate study. Admission is possible for the both the fall and spring semesters. Full details of admission requirements are on the Web page of the department offering the concentration.

All applicants whose native language is not English are required to submit TOEFL or International English Language Testing System (IELTS) scores as evidence of English proficiency. Minimum admission requirements are set by the Graduate College. Higher requirements may be imposed by specific concentrations.

Financial Aid

Students in concentrations under the MEng in Engineering major are not eligible for Board of Trustees (BOT) tuition-waiver generating assistantships at the University of Illinois.

### **Statement for Programs of Study Catalog**

### **Concentration Requirements**

Code	Title	Hours
Core Coursework		12
ME 445	Introduction to Robotics	
ECE 484	Principles of Safe Autonomy	
CS 588	Autonomous Vehicle System Engineering	

Select one of the following: 4

Control and Dyna	mics	
ECE 486	Control Systems	
SE 422	Robot Dynamics and Control	
Optimization		
AE 504	Optimal Aerospace Systems	
ECE 490	Introduction to Optimization	
Hardware System	s	
ME 451	Computer-Aided Mfg Systems	
Artificial Intelliger	nce and Perception	
CS 440	Artificial Intelligence	
CS 543	Computer Vision	
ECE 544	Topics in Signal Processing	
Design and Applic	eations	
CS 465	User Interface Design	
Professional Develop	pment Course	4
ENG 573	Capstone Project	
<b>Additional Coursewo</b>	ork	
•	ected from the course list, with advisor approval. This list includes courses in Control and Dynamics, are Systems, Artificial Intelligence and Perception, Design and Applications.	12
Total Hours		32
Other Requirem	ents and Conditions (may overlap)	
•	, , , , , , , , , , , , , , , , , , , ,	
Requirement	Description (1)	
A minimum of 20 cre Urbana-Champaign of	edit hours must be taken from the University of Illinois campus.	
A minimum of 12 50	0-level credit hours.	

### **EP Documentation**

"Credit/No Credit" option. Minimum GPA: 3.0

### **Attach Rollback/Approval Notices**

 $\label{lem:correspondence} \begin{tabular}{ll} Correspondence with sponsor EP 21041-Engineering\_Automony and Robotics Concentration.pdf $$CfA-MoU\_DEPTS\_final.pdf$$$ 

No courses used to fulfill any degree requirement may be taken using the

### **DMI Documentation**

### **Program Reviewer Comments**

Mahesh Viswanathan (vmahesh) (Tue, 25 Feb 2020 23:24:28 GMT):Rollback: By request of Harry Dankowicz Emily Stuby (eastuby) (Fri, 14 Aug 2020 20:05:32 GMT):Rollback: Department Request

## Academic Catalog Entry

### MEng in Engineering: Concentration in Autonomy and Robotics

for the degree of Master of Engineering in Engineering, Autonomy and Robotics Concentration

# Overview

associate dean for graduate, professional and online programs: Harry Dankowicz

overview of admissions & requirements: <a href="https://grainger.illinois.edu/academics/graduate">https://grainger.illinois.edu/academics/graduate</a>
overview of grad college admissions & requirements: <a href="https://grad.illinois.edu/admissions/apply">https://grad.illinois.edu/admissions/apply</a>

college website: https://grainger.illinois.edu/

address: 402 Engineering Hall, 1308 W Green St, Urbana, Illinois 61801

phone: (217) 244-2745 email: engr-gpp@illinois.edu

The Grainger College of Engineering offers a Master of Engineering (MEng) degree program for students whose primary intent is a professional career in industry or government. This degree differs from the Master of Science (MS) degree in that it is a professionally-oriented master's degree that is not a pathway to a doctoral program. The Major in Engineering for the M.Eng. degree requires the selection of an interdisciplinary concentration, which must be identified at the time of application. Available concentrations are:

- Aerospace Systems Engineering
- Autonomy and Robotics
- Energy Systems
- Plasma Engineering
- Railway Engineering

### Admission

Students with bachelor's or master's degrees in engineering or related sciences will be considered for admission if they have a grade point average of at least  $3.00 \, (A = 4.00)$  for the last two years of undergraduate study. Admission is possible for the both the fall and spring semesters. Full details of admission requirements are on the Web page of the department offering the concentration.

All applicants whose native language is not English are required to submit <u>TOEFL</u> or <u>International English Language Testing System (IELTS)</u> scores as evidence of English proficiency. <u>Minimum admission requirements</u> are set by the Graduate College. Higher requirements may be imposed by specific concentrations.

### Financial Aid

Students in concentrations under the MEng in Engineering major are not eligible for Board of Trustees (BOT) tuition- waiver generating assistantships at the University of Illinois.

# Degree Requirements

# Concentration Requirements

Core Course	vork	16
ME 445	Introduction to Robotics	4
ECE 484	Principles of Safe Autonomy	4
CS 588	Autonomous Vehicle System Engineering	4
Select one of	the following:	4
Control ar	nd Dynamics	
ECE 486	Control Systems	
SE 422	Robot Dynamics and Control	
Optimizat	ion	
AE 504	Optimal Aerospace Systems	
ECE 490	Introduction to Optimization	
Hardware	Systems	
ME 451	Computer-Aided Mfg Systems	
Artificial In	telligence & Perception	
CS 440	Artificial Intelligence	
CS 543	Computer Vision	
ECE 544	Topics in Signal Processing	
Design & Ap	oplications	
CS 465	User Interface Design	
Professional	Development Course	4
ENG 573	Capstone Project	
Additional Co	oursework	12
Electives may be selected from the course list, with advisor approval. This list includes courses in Control and Dynamics, Optimization, Hardware Systems, Artificial Intelligence & Perception, and Design & Applications.		
Total Hours		32

# Other Requirements and Conditions (may overlap)

A minimum of 20 credit hours must be taken from the University of Illinois Urbana-Champaign campus.

A minimum of 12 500-level credit hours.

No courses used to fulfill any degree requirement may be taken using the "Credit/No Credit" option.

# Course List

ECE 437

# Robotics & Automation MEng elective course list (12 credits = pick 3)

# indicates that the course was not offered in 2020

<sup>\*</sup> indicates that the course is also on the list of specialized core courses

Control & Dynamics		
<u>AE 454</u>	Systems Dynamics & Control	3 or 4
<u>AE 554</u>	Dynamical Systems Theory	4
<u>AE 555</u>	Multivariable Control Design	4
<u>AE 556</u>	Robust Control	4
ECE 515	Control System Theory & Design	4
ECE 486	Control Systems	4
ECE 489	Robot Dynamics and Control	4
ECE 517	Nonlinear & Adaptive Control	4
ECE 528	Analysis of Nonlinear Systems	4
ECE 553	Optimum Control Systems	4
ECE 555	Control of Stochastic Systems	4
ECE 557	Geometric Control Theory	4
ECE 568	Model & Cntrl Electromech Syst	4
ECE 573	Power System Control	4
ME 440	Kinem & Dynamics of Mech Syst	3 or 4
ME 446	Robot Dynamics and Control	4
ME 460	Industrial Control Systems	4
ME 540	Control System Theory & Design	4
ME 561	Convex Methods in Control	4
ME 562	Robust Adaptive Control	4
<u>SE 424</u>	State Space Design for Control	3
<u>SE 521</u>	Multivariable Control Design	4
<u>SE 525</u>	Control of Complex Systems	4
TAM 412	Intermediate Dynamics	4
TAM 516	Dynamical Systems Theory	4
Optimization		
<u>AE 504</u>	Optimal Aerospace Systems	4
<u>CS 544</u>	Optimiz in Computer Vision	4
ECE 490	Introduction to Optimization	3 or 4
ECE 580	Optimiz by Vector Space Methds	4
<u>IE 411</u>	Optimization of Large Systems	3 or 4
	Combinatorial Optimization	4
IE 519	Combinatorial Optimization	
<u>IE 519</u> IE 521	·	
<u>IE 519</u> <u>IE 521</u> Hardware Systems	Convex Optimization	4

Sensors and Instrumentation

3

ME 451	Computer-Aided Mfg Systems	3 or 4
ME 452	Num Control of Mfg Processes	3 or 4
ME 455	Micromanufacturing Process & Automation	3 or 4
ME 461	Computer Cntrl of Mech Systems	3 or 4
ME 541	Control of Machine Systems	4
<u>SE 420</u>	Digital Control Systems	4
<u>SE 423</u>	Mechatronics	3
Coftware Cyctoms		
Software Systems	Pool Time Systems	3 or 4
<u>CS 424</u>	Real-Time Systems	
<u>CS 425</u>	Distributed Systems	3 or 4
<u>CS 427</u>	Software Engineering I	3 or 4
<u>CS 428</u>	Software Engineering II	3 or 4
<u>CS 438</u>	Communication Networks	3 or 4
<u>CS 461</u>	Computer Security I	4
<u>CS 476</u>	Program Verification	3 or 4
<u>CS 477</u>	Formal Software Development Methods	3 or 4
<u>CS 483</u>	Applied Parallel Programming	4
<u>CS 484</u>	Parallel Programming	3 or 4
Artificial Intelligence & Pe	rception	
<u>AE 583</u>	Advanced Robotic Planning	4
<u>CS 440</u>	Artificial Intelligence	3 or 4
<u>CS 446</u>	Machine Learning	3 or 4
<u>CS 447</u>	Natural Language Processing	3 or 4
<u>CS 543</u>	Computer Vision	4
<u>CS 546</u>	Machine Learning in NLP	4
ECE 534	Random Processes	4
ECE 543	Statistical Learning Theory	4
ECE 561	Detection & Estimation Theory	4
ECE 566	Computational Inference and Learning	4
<u>IE 534</u>	Deep Learning	4
<u>SE 524</u>	Data-Based Systems Modeling	4
Design & Applications		
<u>AE 456</u>	Global Nav Satellite Systems	4
<u>AE 484</u>	UAV Performance, Design, and Fabrication	3
<u>CS 465</u>	User Interface Design	3 or 4
<u>CS 565</u>	Human-Computer Interaction	4
<u>SE 400</u>	Engineering Law	3 or 4

# Memorandum of Understanding: Financial Model M.Eng. in Autonomy & Robotics Participating Departments: Aero, CS, ECE, MechSE, ISE

This document constitutes a memorandum of understanding (MOU), between the Center for Autonomy (CfA) and the 5 participating departments (listed above and hereafter referred to as the "Departments"), relating to the financial arrangements for the proposed M.Eng. in Autonomy and Robotics (hereafter referred to as the "Program").

This agreement will be active for the first 3 years of the Program, starting the first semester the Program has admitted students. During this period the Program will be limited to a maximum of 20 students in each of years Y1 and Y2, and 25 students in Y3.

### The Basic Formula

The CfA will receive some portion of the student tuition back from the CoE each year. Let T represent *this tuition quantity* and set

P =T - E.

where E represents the **Program related expenses** that the CfA pays to either the College or the Campus.

It is emphasized that E can *only* include expenses paid directly to these two sources, which could for instance include payments for space, utilities, cleaning, and may also include some clerical costs. Further to this, E will include both (i) expenses that are explicitly associated only with the Program; and (ii) expenses that may be co-mingled with other CfA expenses. In the case of (ii), for each such co-mingled expense the proportion that is reasonably attributable to the Program will be added to E; however, each of these expenses must be approved by *all* Departments.

This net amount P will be split each year between the CfA and the Departments, with 50% going to the CfA and the remaining 50% being split between the Departments, with each department receiving a customized amount dependent on its contribution to the teaching resources used by the Program. The specific amount AD received by department D will be computed as

AD=P/2\*WD,

where WD denotes department D's weight given by

WD=(total number of credits delivered by **department D** to Program students) **divided by** (total number of credits taken by students in the Program).

A course will be deemed to be delivered by department D if the instructor has their primary appointment in that department, irrespective of the course rubric. The CfA will maintain careful records of the specific instructors of all courses taken by students in the Program. These records, together with the quantities T, E, WD and AD, will be reported annually to all Departments for the 3 years covered by this MOU.

### **Service in Excess for Faculty**

It is acknowledged that there may be unusual circumstances when it would be appropriate for the CfA to compensate faculty (e.g., service in excess, or ICR for research) for exceptional contributions to administering or delivering the Program. Such situations will be rare, will represent service in excess, and will be approved in advance by the Heads of all the Departments in an anonymous vote.

Any amendments to this MOU must be agreed to by all parties.

Nancy M. Amato, Head, Computer Science
Jonathan Freund, Head, Aerospace Engineering
Bruce Hajek, Head, Electrical and Computer Engineering
Anthony M. Jacobi, Head, Mechanical Science and Engineering
Deborah Thurston, Interim Head, Industrial and Enterprise Systems Engineering

Geir E. Dullerud, Director, Center for Autonomy



### **GRADUATE COLLEGE**

110 Coble Hall, MC-322 801 S. Wright St. Champaign, IL 61820

### PROGRAM TUITION WAIVER POLICY PROPOSAL

Proposals to establish or revise tuition waiver policy for a graduate program will follow a shared governance approval process (Department, School, College, Graduate College).

### **Definitions of Tuition Waiver Policy Designations:**

**Traditional Programs.** Programs either designated as generating <u>full or base-rate</u> tuition waivers. Base rate waivers waives only the Resident Graduate Base tuition amount. Non-Residents or students in a program with an additional tuition differential will be responsible for the remaining portion of tuition.

**Reimbursable Programs**. Programs identified as programs that would be reimbursed from an appointing unit outside their academic college.

Cost-recovery and self-supporting programs. Students in approved cost-recovery and self-supporting programs are not eligible to receive tuition and fee waivers except statutory waivers. Students in these programs are not eligible to hold a waiver generating graduate appointment (Assistantship or Fellowship). Full time employees may be admitted to these programs, but their employee waiver is not eligible for use towards a program with this designation.

Additional information related to these tuition waiver designations can be found here: <a href="http://www.grad.illinois.edu/gradhandbook/2/chapter7/tuition-waivers#otherprovisions">http://www.grad.illinois.edu/gradhandbook/2/chapter7/tuition-waivers#otherprovisions</a>.

### PROGRAM INFORMATION

OLLEGE OR SCHOO	Grainger	College of Eng	gineering	*****************
ROGRAM(s) (Include		licable):		
Autonomy and Robo	ics, MEng			
REQUESTED DESIGN	NATION (Select desire	ed designation type):		
Self-Supporting				
Comments:				

### JUSTIFICATION: On a separate sheet, please address the following.

- 1. Describe the reasons for this request and explain: (a) the pros and cons of the classification requested, and (b) how the requested classification will benefit and not adversely affect the academic quality of the program.
- 2. What type of financial assistance will be offered to students in the program?
- 3. Has this program had past practice of offering graduate assistantships? If so, please describe.
- 4. What provisions will be made to communicate the new classification to prospective and newly admitted students?

APPROVALS: (May use Adobe Signature or print and sign/the document)
Department Executive Officer Signature and Date: 10/21/20
Disciplinary College Signature and Date:
Graduate College Signature and Date:
4
Ollison McKinney 12/11/20

- 1. Describe the reasons for this request and explain: (a) the pros and cons of the classification requested, and (b) how the requested classification will benefit and not adversely affect the academic quality of the program.
- (a) The proposed concentration is not a research-oriented program. It is designed so that it can be completed in two or three semesters in order to address an academic training gap at a professional level. The requested classification enhances the educational experience of students and employability of graduates who, after attaining a BS degree in engineering or equivalent field, will benefit from the differentiated value provided by this advanced professional degree. The requested classification is not expected to adversely impact recruitment of students interested in a research oriented track with a traditional tuition model, nor significantly limit the potential pool of prospective students to the professionally-oriented track.
- (b) The Grainger College of Engineering will use some of the graduate tuition dollars returned to the college from the Office of the Vice Provost for Budget and Resource Planning to provide the participating academic units with resources needed to support the proposed curriculum. Graduate tuition funds returned to the college from campus may be used to fund faculty and lecturer salaries, support instruction, or at the discretion of the participating Department Heads in a manner consistent with campus policy on use of such funds.
- 2. What type of financial assistance will be offered to students in the program?

The program may elect to offer scholarships to students in this program in an effort make the program more attractive and affordable for highly-qualified students and/or students from backgrounds underrepresented in STEM fields.

3. Has this program had past practice of offering graduate assistantships? If so, please describe.

This program will not offer graduate assistantships.

4. What provisions will be made to communicate the new classification to prospective and newly admitted students?

The self-supporting classification will be clearly explained on the program's website and in any and all communications to prospective students.



### **COLLEGE OF ENGINEERING**

Department of Aerospace Engineering 306 Talbot Laboratory, MC-236 104 S. Wright St. Urbana, IL 61801

February 25, 2020

Dear Prof. Dullerud,

As head of the Department of Aerospace Engineering, based on discussion with departmental leadership I am writing to express the department's support for the proposed M. Eng. In Engineering with a Concentration in Autonomy and Robotics.

Aerospace Engineering is pleased to jointly sponsor this degree program, which will prepare professionally oriented students to enter the multi-disciplinary and rapidly expanding field of autonomy and robotics. I will encourage our faculty to serve on the Admissions Committee and on the Course Oversight Committee on a reasonable, asneeded basis. The graduate courses that our faculty teach in the area of autonomy and robotics will accept enrollment from qualified students in the proposed degree program.

Thank you for leading this important effort.

Jonathern B French

Sincerely,

Jonathan Freund

Professor and Head, Aerospace Engineering



Department of Electrical & Computer Engineering 2120 Electrical & Computer Engineering Building, MC-702 306 N. Wright St. Urbana, IL 61801-2991

February 24, 2020

Dear Geir,

In October 2019, I shared your preliminary proposal with the ECE Advisory Committee and the Associate Department Heads, including the Associate Head for Graduate Affairs, Michael Oelze. Based on the brief discussion, I can report that ECE is pleased to endorse the proposed program, Engineering: Autonomy and Robotics, MEng. The organization, including a standing committee for admission and a standing committee for course oversight, is appropriate. You may want to consider the possibility of allowing each student to affiliate with an academic department. While details of the funding model are yet to be worked out, it will likely involve some portion of funds allocated to academic departments based on the instructional units provided by faculty members from those departments. ECE looks forward to cooperation and collaboration to make this an exciting, successful, model program.

Sincerely,

Bruce Hajek

Bruce Hajeh

Head, Department of Electrical and Computer Engineering

Center for Advanced Study Professor of Electrical and Computer Engineering

Hoeft Endowed Chair in Engineering

Professor, Coordinated Science Laboratory



Department of Industrial & Enterprise Systems Engineering 117 Transportation Building, MC-238 104 S. Mathews Ave. Urbana, IL 61801-2925

March 31, 2020

Prof. Geir E. Dullerud W. Grafton and Lillian B. Wilkins Professor in Mechanical Engineering Director of Decision and Control Laboratory University of Illinois at Urbana-Champaign

Dear Geir:

The Department of Industrial & Enterprise Systems Engineering (ISE) at the University of Illinois at Urbana-Champaign's Grainger College of Engineering enthusiastically endorses the proposal for a new *M. Eng. In Engineering with a Concentration in Autonomy and Robotics*, organized through the Center for Autonomy under the able leadership of Prof. Tim Bretl and you. The ISE Courses and Curriculum Committee (CCC) discussed the proposal at its meeting on March 11, 2020. The CCC voted unanimously in favor of the proposal.

The university enjoys #1 rank in *Automation and Control* according to the 2019 Shanghai Rankings of World Universities. This program puts together 5 strong departments to offer this unique professionally oriented program at a very timely manner as autonomy is becoming pervasive to our lives. The curriculum is strong and there is a strong demand for such a specialization.

The ISE courses listed from IE and SE rubrics are strong courses for this degree program and have space to accommodate the MEng students at this time. I understand admissions will be done by a joint committee with representatives from each of the 5 CoE departments: ECE, MechSE, Aero, CS, and ISE.

Please don't hesitate to contact me if I can be of further assistance in this matter.

Sincerely,

Deborah L. Thurston, P.E., Ph.D., ASME Fellow

Gutsgell Professor and Interim Head, Industrial and Enterprise Systems Engineering

Co-Director, The Hoeft Technology and Management Program

Director, Decision Systems Laboratory

Dehed Thuran



Department of Mechanical Science & Engineering
Office of the Department Head
144 Sidney Lu Mechanical Engineering Building, MC-244
1206 W. Green St.
Urbana, IL 61801

October 17, 2019

Dear Professor Dullerud,

As head of the Department of Mechanical Science and Engineering, I offer our department's full support for the proposed *M.Eng. in Engineering with a Concentration in Autonomy and Robotics*.

The MechSE Department is pleased to jointly sponsor this degree program with the departments of Aerospace Engineering, Computer Science, Electrical and Computer Engineering, and Industrial & Enterprise Systems Engineering. The program will prepare students seeking a professional engineering degree to enter the multidisciplinary field of autonomy and robotics. I commit to providing faculty to serve on the Admissions Committee and the Course Oversight Committee on a reasonable, as-needed basis. The graduate courses that our faculty teach in the area of autonomy and robotics will accept enrollment from qualified students in the proposed degree program.

I am proud that the Department of Mechanical Science and Engineering will play a key role in educating students in this rapidly developing field. Thank you for your endeavors.

Sincerely,

Anthony M. Jacobi

Richard W. Kritzer Distinguished Professor

Department Head, Mechanical Science & Engineering



Department of Industrial & Enterprise Systems Engineering 117 Transportation Building, MC-238 104 S. Mathews Ave. Urbana, IL 61801-2925

October 14, 2019

Prof. Geir E. Dullerud W. Grafton and Lillian B. Wilkins Professor in Mechanical Engineering Director of Decision and Control Laboratory University of Illinois at Urbana-Champaign

Dear Geir:

The Department of Industrial & Enterprise Systems Engineering (ISE) at the University of Illinois at Urbana-Champaign's Grainger College of Engineering enthusiastically endorses the proposal for a new *M. Eng. in Engineering with a Concentration in Autonomy and Robotics*, organized through the Center for Autonomy under the able leadership of Prof. Tim Bretl and you.

The university enjoys #1 rank in *Automation and Control* according to the 2019 Shanghai Rankings of World Universities. This program puts together 5 strong departments to offer this unique professionally oriented program at a very timely manner as autonomy is becoming pervasive to our lives. The curriculum is strong and there is a strong demand for such a specialization.

The ISE courses listed from IE and SE rubrics are strong courses for this degree program and have space to accommodate the MEng students at this time. I understand admissions will be done by a joint committee with representatives from each of the 5 CoE departments: ECE, MechSE, Aero, CS, and ISE.

Please don't hesitate to contact me if I can be of further assistance in this matter.

Sincerely,

Rakesh Nagi, PhD

Donald Biggar Willett Professor of Engineering and Department Head

nagi@illinois.edu



### **DEPARTMENT OF COMPUTER SCIENCE**

NANCY M. AMATO

Thomas M. Siebel Center for Computer Science 201 N. Goodwin Ave. Urbana, IL 61801-2302 USA Abel Bliss Professor and Head 2248 Siebel Center namato@illinois.edu

May 31, 2020

Professor Geir Dullerud W. Grafton and Lillian B. Wilkins Professor in Mechanical Engineering Director of the Center for Autonomy

The Department of Computer Science enthusiastically endorses the proposed M.Eng. in Engineering with a Concentration in Autonomy and Robotics.

In order to evaluate this new degree program, the proposal was reviewed by the AI Area (responsible for coordinating and overseeing AI teaching and research activities in the Department), the Departmental Graduate Study Committee, the Director of Graduate Studies, Professor Brian Bailey, the Associate Head for Academics, Professor Mahesh Viswanathan, and myself, the Department Head. Additionally, I discussed the matter with the Director of the Center for Autonomy, Professor Geir Dullerud.

The Computer Science Department is excited to jointly sponsor this degree program with the departments of Aerospace Engineering, Electrical and Computer Engineering, Industrial & Enterprise Systems Engineering, and Mechanical Science & Engineering. The Computer Science Leadership is supportive of our faculty participating in the administration of this program, e.g., by serving on the Admissions Committee and the Course Oversight Committee on a reasonable, as-needed basis. The graduate courses that our faculty teach in the area of autonomy and robotics will accept enrollment from qualified students in the proposed degree program.

This is a timely program that will prepare professionally oriented students to enter the multidisciplinary and rapidly expanding field of autonomy and robotics. The program will take advantage of Illinois' long stranding strength in autonomy and control and will provide more visibility to our strong and growing activity in robotics.

Sincerely,

Nancy M. Amato

Abel Bliss Professor and Head Department of Computer Science From: Pahre, Jennifer N
To: Dullerud, Geir E

Cc: Martensen, Kathy; Lehman, Barbara J

**Subject:** Re: Senate Educational Policy Proposal Number 21.041 -- Engineering: Automony and Robotics Concentration

**Date:** Thursday, January 21, 2021 3:44:01 PM

Attachments: Outlook-v1q3qqay.png

### Dear Geir,

Thank you for your very timely and helpful response. You thoroughly have answered all pending questions. If anything else arises, I will reach out.

All best, Jennie



### College of Law

Jennifer N. Pahre

Director of Undergraduate Studies

**Assistant Teaching Professor** 

University of Illinois College of Law

504 East Pennsylvania Avenue

Champaign, Illinois 61820

Pronouns: She/her/hers

Under the Illinois Freedom of Information Act (FOIA), any written communication to or from University employees regarding University business is a public record and may be subject to public disclosure.

From: Dullerud, Geir E <dullerud@illinois.edu>
Sent: Thursday, January 21, 2021 3:29 PM
To: Pahre, Jennifer N <jpahre@illinois.edu>

**Cc:** Martensen, Kathy <kmartens@illinois.edu>; Lehman, Barbara J <bjlehman@illinois.edu> **Subject:** Re: Senate Educational Policy Proposal Number 21.041 -- Engineering: Automony and

Robotics Concentration

### Dear Jennie,

Thank you for your email—great to hear that your subcommittee is now considering our M.Eng. proposal. Concerning the questions raised:

The first question concerns the number of members in the oversight committees.

It seems that the two oversight committees (Admissions and Curriculum) are to have just four members each. Given the interdisciplinary nature of the program among five academic units in Grainger, why not have at least one member from each unit on the committees? (I understand the impetus to follow other protocols -- perhaps the choice of four members is consistent with other similar committees in Grainger?)

Each of these committees will have a minimum of 4 members each but may have more; we specifically chose this number to provide additional flexibility for staffing the committees, as it might not be possible to always have members from all 5 departments on each committee. Members from all 5 participating departments will be solicited each year for each committee, and certainly we expect that between the 2 committees we will have representation from all 5 departments. We would prefer to keep this flexibility as proposed if possible, provided your subcommittee is supportive. Let me confirm that the proposal has been approved by all 5 departments and also subsequently by the Grainger Executive Committee with full support, and so it can reasonably be inferred that the plan for these committees is in compliance with accepted norms within the College.

The second question concerns the sharing of revenue and costs across the departments. Is there any formalized way that costs and revenues are going to be allocated? (Again, I wonder if sharing would be managed by other, existing management practices?)

Yes, there is a formalized agreement to which all 5 departments have agreed, as has Grainger; I am attaching it here.

If I can provide additional input or clarification please do not hesitate to reach out.

Again, I very much appreciate the work of the Subcommittee and am glad to hear that the proposal may be considered at the upcoming meeting on the 25th.

```
Geir

//

// Geir E. Dullerud

// W. Grafton and Lillian B. Wilkins Professor in Mechanical Engineering

// Director of Decision and Control Laboratory

// Affiliate Professor of Electrical and Computer Engineering

// Affiliate Professor of Computer Science

// Research Professor of Coordinated Science Laboratory

// University of Illinois at Urbana-Champaign

//

// mail: Department of Mechanical Science and Engineering
```

Best regards,

```
// University of Illinois, MC-244
// 1206 West Green Street, Urbana, IL 61801
//
// vox: 217-265-5078
// fax: 217-244-6534
// skype: dullerudge
// e-mail: dullerud@illinois.edu
// www: <a href="http://www.mechse.illinois.edu/directory/faculty/dullerud/">http://www.mechse.illinois.edu/directory/faculty/dullerud//</a>
```

I look forward to hearing from you.

With thanks for your assistance,

Jennie

<Outlook-04vr015x.png>

Jennifer N. Pahre

Director of Undergraduate Studies

Assistant Teaching Professor

University of Illinois College of Law

504 East Pennsylvania Avenue

Champaign, Illinois 61820

Pronouns: She/her/hers

Under the Illinois Freedom of Information Act (FOIA), any written communication to or from University employees regarding University business is a public record and may be subject to public disclosure.

Date Submitted: 11/09/23 9:12 am

Viewing: 10KS0365MSW &

# 10KS0365MSWX : Social Work, MSW (on campus & online)

Last approved: 09/18/19 1:14 pm

Last edit: 01/12/24 9:33 am
Changes proposed by: Cheryl Street

Proposal Type:

### In Workflow

- 1. U Program Review
- 2. 1783 Head
- 3. LL Committee Chair
- 4. LL Dean
- 5. University Librarian
- 6. Grad\_College
- 7. COTE Programs
- 8. Provost

### 9. Senate EPC

- 10. Senate
- 11. U Senate Conf
- 12. Board of Trustees
- 13. IBHE
- 14. HLC
- 15. DOE
- 16. DMI

# **Approval Path**

- 1. 11/10/23 5:43 pm
   Donna Butler
   (dbutler):
   Approved for U
   Program Review
- 2. 11/10/23 5:44 pm Cheryl Street (street): Approved for 1783 Head
- 3. 11/10/23 5:55 pm Cheryl Street (street): Approved for LL Committee Chair
- 4. 11/11/23 8:54 am
  Janet Liechty
  (jliechty):
  Approved for LL
  Dean
- 5. 11/21/23 12:12 pm

Claire Stewart (clairest): Approved for University Librarian

- 6. 12/14/23 3:24 pm Allison McKinney (agrindly): Approved for Grad\_College
- 7. 01/04/24 8:33 pm Suzanne Lee (suzannel): Approved for COTE Programs
- 8. 01/11/24 9:30 am
  Brooke Newell
  (bsnewell):
  Approved for
  Provost

# History

- 1. Apr 6, 2019 by Deb Forgacs (dforgacs)
- 2. Sep 18, 2019 by Deb Forgacs (dforgacs)

Major (ex. Special Education)

This proposal is

for a:

Revision

# Administration Details

Official Program

Social Work, MSW (on campus & online)

Name

Diploma Title

Sponsor College Social Work, School of

Sponsor

Social Work

Department

Sponsor Name <u>Janet Liechty</u>

Sponsor Email <u>jliechty@illinois.edu</u>

College Contact Cheryl Street College Contact Email

### street@illinois.edu

College Budget

Officer

College Budget

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Does this program have inter-departmental administration?

Νo

# Proposal Title

Effective Catalog

Fall 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Master of Social Work in Social Work in the School of Social Work and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This MSW proposal (key 488) is related to the concentrations in Advanced Clinical (key 803) and the Leadership and Social Change (key 804);

# **Program Justification**

Provide a brief description of what changes are being made to the program.

- 1. We are requesting to revise delivery model from distance learning off site in Chicago (10KS0365MSWX), to online learning (10KS0365MSWU).
- 2. We revised the program of study table to align with campus requirements for concentration transparency by including core curriculum categories that exist for both concentrations. Since the coursework underneath the categories differs, specificity isn't outlined other than the categories. We also re-arranged/revised the headings.
- 3. Changed time to degree from 30 to 18 months

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

No

Why are these changes necessary?

- 1. At the start, in the 1970s the MSW was offered extramurally throughout the state. In 2006 the program was offered primarily in Chicago, and so continued to have an extramural "X code." Due to being required to deliver all iMSW courses online during the covid pandemic we re-evaluated how our iMSW curriculum was being delivered and it was determined that it could be delivered in a fully online model without losing any educational components. This allows our program to meet the needs of students in rural communities.
- 2. The revision to the program of study table was due to the request from campus related to the concentration project. We moved the Field Education header to the bottom because this is completed last. We removed "Focus Area" from the elective heading because we don't have focus areas anymore.
- 3. Completion time to a more accurate average time to degree.

### 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?

Nο

Does this new program/proposed change result in the replacement of another program?

No

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

No

# Program Regulation and Assessment

# Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

Demonstrate Ethical and Professional Behavior

Engage Diversity and Difference in Practice

Advance Human Rights and Social, Economic, and Environmental Justice

Engage in Practice-informed Research and Research-Informed Practice

**Engage in Policy Practice** 

Engage with Individuals, Families, Groups, Organizations, and Communities

Assess Individuals, Families, Groups, Organizations, and Communities

Intervene with Individuals, Families, Groups, Organizations and Communities

Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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/PublicAdminRules2017.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.

Revised programs Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

Statement for Programs of Study Catalog

This program is available on campus or online. campus, online & blended (online/face-

### to-face).

<u>The requirements below for Students pursuing</u> the Master of Social Work <u>will be met by choosing one of these must apply to and complete a graduate concentrations: concentration:</u>

Advanced Clinical Practice, Clinical Practice, or

<u>Leadership & Social Change</u> (LSC)

### Requirements for students entering with a BSW (Advanced Standing)

Course List

Code Title Hours

**Methods** 

Policy

Research

**HBSE** 

**Electives** 

Field Education

Total Hours 44-56

### Requirements for students entering without a BSW

Course List

Code Title Hours

Methods

**Policy** 

Research

**HBSE** 

**Electives** 

Field Education

Total Hours 64-72

### **Other Requirements**

**Grad Other Degree Requirements** 

Requirement Description

A concentration is required.

Minimum 500-level Hours Required Overall:36 or 48

Minimum GPA: 3.0

Corresponding

MSW Master of Social Work

Degree

# **Program Features**

Academic Level Graduate

Does this major Yes

have transcripted concentrations?

Will you admit to Yes

the concentration

directly?

Is a concentration Yes

required for graduation?

What is the typical time to completion of this program?

18 Months

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

44

What is the 3.0

required GPA?

CIP Code 440701 - Social Work.

Is This a Teacher Certification Program?

Yes

Will specialized accreditation be sought for this program?

Yes No

Describe the plans for seeking specialized accreditation:

It is accredited by the Council of Social Work Education.

# **Delivery Method**

This program is

available:

On Campus and Online - 2 program types. Students can receive the entire program either on campus or online. Students can choose to take courses in either modality.

Describe the use of this delivery method:

This program is available on <u>campus and online</u>. <del>campus, online & blended (online/face-to-face).</del>

# Admission Requirements

Desired Effective

Admissions Term

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

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

We do not anticipate that this change will result in reduced enrollment

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

What is the

Fall

matriculation term for this program?

# Budget

Are there

No

budgetary

implications for this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget

Information

Attach File(s)

### Financial Resources

How does the unit intend to financially support this proposal?

The tuition for the online program will remain the same as the per credit hour tuition that was assessed for the outreach program.

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

No

Attach letters of

support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

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

No

Is this program requesting self-supporting status?

<u>No</u>

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

No additional impact to faculty resources.

# Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

The current Library resources are sufficient with this revision.

### **EP** Documentation

EP.24.051 **EP Control** 

Number

Attach

Rollback/Approval

**Notices** 

This proposal

requires HLC

inquiry

No

### **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook MSW:Social Work -UIUC & MSW:Soc Work-Off Campus-UIUC

Name

Program Code: 10KS0365MSW & 10KS0365MSWX

Minor Conc Degree Major MSW Code Code Code Code

0365

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

DOE Approval Date

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer Comments

Mary Lowry (lowry) (03/23/23 1:51 pm): Rollback: Rollback for modality question Allison McKinney (agrindly) (09/06/23 3:09 pm): Rollback: Per Cheryl Brooke Newell (bsnewell) (09/08/23 11:05 am): Rollback: email sent to Cheryl Brooke Newell (bsnewell) (09/29/23 2:00 pm): Rollback: Per request by Cheryl Brooke Newell (bsnewell) (10/03/23 9:06 am): Rollback: Email sent to Cheryl Mary Lowry (lowry) (10/25/23 4:45 pm): Rollback: Cheryl, please see email from 10-24-23

Mary Lowry (lowry) (11/07/23 10:50 am): Rollback: See email dated 11-7-23

Key: 488

Date Submitted: 09/07/23 2:37 pm

Viewing: 5510: Social Work: Advanced

**Clinical Practice, MSW** 

Last approved: 02/23/23 4:11 pm

Last edit: 01/12/24 9:33 am

Changes proposed by: Cheryl Street

Social Work: Advanced Clinical Practice, MSW

Catalog Pages Using this Program

Proposal Type:

### In Workflow

- 1. U Program Review
- 2. 1783 Head
- 3. LL Committee Chair
- 4. LL Dean
- 5. University Librarian
- 6. Grad\_College
- 7. COTE Programs
- 8. Provost
- 9. Senate EPC
- 10. Senate
- 11. U Senate Conf
- 12. Board of Trustees
- 13. IBHE
- 14. HLC
- 15. DOE
- 16. DMI

# Approval Path

- 1. 09/08/23 2:28 pm
  Donna Butler
  (dbutler):
  Approved for U
  Program Review
- 2. 10/04/23 6:05 pm Janet Liechty (jliechty): Approved for 1783
- Head
  3. 10/04/23 6:10 pm
- Cheryl Street
  (street): Approved
  for LL Committee
  Chair
- 4. 10/12/23 8:14 pm
  Janet Liechty
  (jliechty):
  Approved for LL
  Dean
- 5. 10/15/23 1:19 pm

Claire Stewart (clairest): Approved for University Librarian

- 6. 12/14/23 3:24 pm Allison McKinney (agrindly): Approved for Grad\_College
- 7. 01/04/24 8:34 pm
  Suzanne Lee
  (suzannel):
  Approved for
  COTE Programs
- 8. 01/11/24 9:30 am
  Brooke Newell
  (bsnewell):
  Approved for
  Provost

# History

- 1. Jul 2, 2019 by Mary Lowry (lowry)
- 2. Aug 19, 2019 by Mary Lowry (lowry)
- 3. Feb 23, 2023 by Brooke Newell (bsnewell)

Concentration (ex. Dietetics)

This proposal is

for a:

Revision

# Administration Details

Official Program

Social Work: Advanced Clinical Practice, MSW

Name

Diploma Title

Sponsor College

Social Work, School of

Sponsor

Social Work

Department

Sponsor Name <u>Janet Liechty</u>

Sponsor Email <u>iliechty</u>

College Contact Cheryl Street College Contact

Email

street@illinois.edu

College Budget

Officer

College Budget

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Does this program have inter-departmental administration?

No

# Proposal Title

Effective Catalog Spring 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Concentration in Advanced Clinical Practice in the Master of Social Work in Social Work in the School of Social Work and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This concentration (key 803) is related to the MSW proposal (key 488) and the Leadership and Social Change (key 804).

# **Program Justification**

Provide a brief description of what changes are being made to the

program.

Changes in this proposal include:

- 1) Revise delivery model from distance learning (10KS0365MSWX) to online learning (10KS0365MSWU).
- 2) We made revisions to the Program of Study. POS revisions were made to reflect current practice in the requirements for students entering without a BSW, because

some of these students may have taken these courses during their undergrad program. For them we will waive up to 8 hours of the foundation coursework from Policy or Research or HBSE. Also, we moved the elective rows up for transparency because the Field Placement is the last requirement completed.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

No

Why are these changes necessary?

- 1) Due to being required to deliver all iMSW courses online during the covid pandemic we re-evaluated how our iMSW curriculum was being delivered and it was determined that it could be delivered in a fully online model without losing any educational components. This allows our program to meet the needs of students in rural communities.
- 2) POS revisions were made to reflect current practice in the requirements for students entering without a BSW, because some of these students may have taken these courses during their undergrad program. For them we will waive up to 8 hours of the foundation coursework from Policy or Research or HBSE. Also, we moved the elective rows up for transparency because the Field Placement is the last requirement completed.

The minimum required hours for the program are not changing.

### 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 this new program/proposed change result in the replacement of another program?

No

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

No

# Program Regulation and Assessment

# Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

Advanced Student Learning Competencies

- <u>1.</u> <u>Demonstrate ethical and professional behavior.</u> <u>Students will demonstrate the ability to:</u>
- 1.1 Develop a self-awareness of ethical standards of practice, and identify situations in which personal values, legal standards, and professional expectations may conflict.
- 1.2 Understand the principles identified in the NASW Code of Ethics such as: <u>limiting</u> practice to personal areas of competence, boundaries of sharing or withholding confidential information, and resolving ethical dilemmas arising from value conflicts.
- 2. Engage diversity and difference in practice. Students will demonstrate the ability to:
- 2.1 Understand the importance of diversity and diverse perspectives on the development and impact of social policies and programs.
- 2.2 Communicate the importance of diversity and diverse perspectives when conducting social change interventions, whether through advocacy, policy development, or leadership in social service agencies.
- 2.3 Engage diverse populations in advocacy, organizational management, policy development, and coalition building.
- 3. Advance human rights and social, economic, and environmental justice. Students will demonstrate the ability to:
- 3.1 Understand key rights and responsibilities embodied in the United Nations

  Universal Declaration of Human Rights, the United Nations Sustainable Development

  Goals, and the U.S. Constitution, and related documents that advocate for social,

  economic, and environmental justice.
- 3.2 Apply social, economic, and environmental justice principles to the analysis and development of policies and programs.
- <u>4.</u> Engage in practice-informed research and research-informed practice. Students will demonstrate the ability to:
- 4.1. Assess and utilize research evidence and effective practice approaches related to social policy, administration, and advocacy.
- 4.4. Apply needs assessments and other data in the conduct of policy analysis, community development, and program development.
- <u>4.3 Be able to conduct social program evaluation studies and interpret findings to enhance both service delivery processes and service outcomes.</u>
- 5. Engage in policy practice. Students will demonstrate the ability to:
- 5.1. <u>Understand leading societal trends that shape the agendas of governmental officials and others involved in policy development.</u>
- <u>5.2.</u> Be able to critically assess legislative, regulatory, and judicial communications related to social policies.
- 5.3. <u>Develop skills in writing brief communications and longer reports on behalf of policy positions.</u>
- <u>6.</u> <u>Engage with individuals, families, groups, organizations, and communities.</u> <u>Students will demonstrate the ability to:</u>
- 6.1 Develop skills required to organize campaigns, build linkages, and develop coalitions with other stakeholders on behalf of social change efforts.
- 6.2 Use empathy, reflection and interpersonal communication skills to effectively engage diverse constituencies in advocacy, policy development, and leadership.
- 7. Assess individuals, families, groups, organizations, and communities. Students will

demonstrate the ability to:

- 7.1. Conduct needs assessments to inform policy advocacy and/or program development that address social needs of a group or community.
- <u>7.2 Identify assessment strategies for improving supervisory and/or organizational effectiveness.</u>
- 7.3 Be able to assess the interests of various stakeholders needed to influence, policy, programs, and social change.
- <u>8.</u> <u>Intervene with individuals, families, groups, organizations, and communities.</u> <u>Students will demonstrate the ability to:</u>
- 8.1 Understand leadership strategies for effecting social change, whether through advocacy, policy development, or leadership strategies to affect social change.
- <u>8.2 Develop entrepreneurial approaches to addressing social service needs of oppressed and marginalized groups.</u>
- 8.3 Demonstrate grant writing skills for accessing resources that support social change and program improvement.
- <u>9. Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities</u>
- 9.1 Critically evaluate the effectiveness and impact of organizational management, human service programs, community development, social welfare policy, and/or social change interventions.
- 9.2. <u>Disseminate results of evaluation or research (such as written reports or presentations)</u> in order to improve programs and influence policy.

Describe how, when, and where these learning outcomes will be assessed.

### Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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/PublicAdminRules2017.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.

Revised programs Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

Statement for

Programs of For additional details and requirements refer to the department's **Graduate** 

Study Catalog Handbook and the Graduate College Handbook.

# Requirements for the Master of Social Work with a concentration in Advanced Clinical Practice Advanced Standing (Entering With a BSW) Other Requirements Without a BSWOther Requirements

### Course List Code Title Hours 12 Methods SOCW 509 Adv Clin Assess & Interviewing Choose two courses from: 8 SOCW 500 SW Practice with Indiv and Fam **SOCW 501** SW Practice with Groups **SOCW 502** Brief Motivational Interventions for Substance Use SOCW 503 Trauma Informed Social Work with Children and Adolescents Behav and Cogn Methods for SW SOCW 505 SOCW 506 SW Practice with Child/Adol SOCW 507 School Social Work Practice **SOCW 508** Family Therapy Seminar SOCW 516 Child, Youth and Family Svcs SOCW 553 Integrated Behavorial Health & Health Care Policy 8 SOCW 589 Social Work and the Law Choose one course from: 4 SOCW 514 Mental Health Pol and Svcs **SOCW 515** Integrated Health Care Policy and Services SOCW 519 Public School Policy/Services SOCW 580 Advanced Child Welfare Research 4 SOCW 541 Clinical Research Seminar or **SOCW 542** Program Evaluation **HBSE** 4 SOCW 552 HBSE II: Mental Disorders Electives 4 Field Education 12-24 SOCW 531 Field Practicum and Integrative Seminar I SOCW 532 Field Practicum and Integrative Seminar II Total Hours: 44-56 **Other Requirements**

A concentration is required.  Minimum 500-level Hours Required Overall:36 Minimum GPA: 3.0  Entering Without a BSW  Course List  Code Title Hours  Methods 16  SOCW 400 Generalist SW Practice Methods SOCW 509 Adv Clin Assess & Interviewing  Choose two courses from: 8  SOCW 500 SW Practice with Indiv and Fam SOCW 501 SW Practice with Groups SOCW 502 Brief Motivational Interventions for Substance Use SOCW 503 Trauma Informed Social Work with Children and Adolescents Behav and Cogn Methods for SW SOCW 505 Section Social Work Practice SOCW 506 SW Practice with Child/Adol SOCW 507 Social Work Practice SOCW 508 Family Threapy Seminar Child, Youth and Family Svcs SOCW 508 Social Work and the Law  Choose one course from: 4 SOCW 514 Mental Health Pol and Svcs SOCW 514 Mental Health Pol and Svcs SOCW 515 SOCW 515 SOCW 510 Social Work Research Methods SOCW 510 SOCW 520 Child Work Research Methods SOCW 541 Mental Health Care Policy and Services SOCW 541 Mental Health Care Policy and Services SOCW 542 Social Work Research Methods SOCW 541 Mental Health Care Policy and Services SOCW 542 Social Work Research Methods SOCW 542 Social Work Research Methods SOCW 542 Social Work Research Methods SOCW 542 Frogram Evaluation HBSE 8 8-12 SOCW 541 HBSE I: Human Development SOCW 542 Field Practicum and Integrative Seminar I Field Education 9 4-8 Field Education 9 4-8 Field Practicum and Integrative Seminar II Field Facticum And Integrative Seminar II Field Fac	Grad Requirement	d Other Degree Requirements  Description		
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Grad Other Degree Requirements		Grad Other Degree Requirements		
	Requirement	<u>.</u>		Description
A concentration is required.	•	n is required.		•
Minimum 500-level Hours Required Overall: 48		·		48

Requirement

Minimum GPA:

A maximim of 8 hours of the Policy, Research or HBSE credit may be waived if taken as an undergraduate.

Description 3.0

# **Program Relationships**

Corresponding

Program(s):

Corresponding Program(s)

Social Work, MSW (on campus & online)

# **Program Features**

Academic Level Graduate

Is This a Teacher Certification Program?

Yes

Will specialized accreditation be sought for this program?

No

Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)

# **Delivery Method**

This program is

available:

On Campus and Online - 2 program types. Students can receive the entire program either on campus or online. Students can choose to take courses in either modality.

Describe the use of this delivery method:

on-campus and online blended

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

> Students that are currently enrolled in the 10KS0365MSWX program code will be migrated to the 10KS0365MSWU code for online

# Budget

Are there Nο

budgetary

implications for

this revision?

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

Nο

Additional Budget Information

Attach File(s)

### Financial Resources

How does the unit intend to financially support this proposal?

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

No

Attach letters of support

Is this program requesting self-supporting status?

Nο

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

No additional impact to faculty resources.

# Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

The current Library resources are sufficient with this revision.

# **EP** Documentation

**EP Control** 

EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

No

requires HLC

inquiry

# **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook Advanced Clinical Practice

Name

Program Code: 5510

Minor Conc 5510 Degree MSW Major Code Code Code Code

0365

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

**IBHE Approval** 

Date

**HLC Approval** 

Date

**DOE** Approval

Date

Effective Date:

Attached

Document

Justification for

this request

Program Reviewer Allison McKinney (agrindly) (09/06/23 3:09 pm): Rollback: Per Cheryl

Comments

Key: 803

Date Submitted: 11/09/23 9:13 am

Viewing: 5559: Social Work:

# Leadership & Social Change, MSW

Last approved: 10/06/22 2:14 pm

Last edit: 01/12/24 9:34 am

Changes proposed by: Cheryl Street

Social Work: Leadership & Social Change, MSW

Catalog Pages Using this Program

Proposal Type:

### In Workflow

- 1. U Program Review
- 2. 1783 Head
- 3. LL Committee Chair
- 4. LL Dean
- 5. University
  Librarian
- 6. Grad\_College
- **7. COTE Programs**
- 8. Provost
- 9. Senate EPC
- 10. Senate
- 11. U Senate Conf
- 12. Board of Trustees
- 13. IBHE
- 14. HLC
- 15. DOE
- 16. DMI

# **Approval Path**

- 1. 11/10/23 5:42 pm Donna Butler (dbutler): Approved for U Program Review
- 2. 11/10/23 5:44 pm Cheryl Street (street): Approved for 1783 Head
- 3. 11/10/23 5:55 pm Cheryl Street (street): Approved for LL Committee Chair
- 4. 11/11/23 8:54 am
  Janet Liechty
  (jliechty):
  Approved for LL
  Dean
- 5. 11/26/23 11:46 am

Claire Stewart (clairest): Approved for University Librarian

- 6. 12/14/23 3:25 pm Allison McKinney (agrindly): Approved for Grad\_College
- 7. 01/04/24 8:35 pm
  Suzanne Lee
  (suzannel):
  Approved for
  COTE Programs
- 8. 01/11/24 9:30 am
  Brooke Newell
  (bsnewell):
  Approved for
  Provost

# History

- 1. Jul 2, 2019 by Mary Lowry (lowry)
- 2. Aug 19, 2019 by Mary Lowry (lowry)
- 3. Oct 6, 2022 by Mary Lowry (lowry)

Concentration (ex. Dietetics)

This proposal is

for a:

Revision

# Administration Details

Official Program

Social Work: Leadership & Social Change, MSW

Name

Diploma Title

Sponsor College

Social Work, School of

Sponsor

Social Work

Department

Sponsor Name <u>Benjamin Lough</u>

Sponsor Email <u>bjlough@illinois.edu</u>

College Contact Cheryl Street College Contact

**Email** 

street@illinois.edu

College Budget

Officer

College Budget

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Does this program have inter-departmental administration?

No

# Proposal Title

Effective Catalog Spring 2024

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Concentration in Leadership & Social Change in the Master of Social Work in Social Work in the School of Social Work and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This proposal (key 804) is related to a revisions to the MSW degree (key 488) and the Advanced Clinical Practice concentration (key 803).

# **Program Justification**

Provide a brief description of what changes are being made to the program.

- 1. We are removing SOCW 521, SOCW 589 and SOCW 554 and adding SOCW 522, SOCW 584, and SOCW 510.
- 2. We are requesting to revise delivery model from distance learning off site in Chicago (10KS0365MSWX), to online learning (10KS0365MSWU).
- 3. POS revisions were made because some of our incoming students may have taken

some required courses during their undergrad program, and in those cases, we do waive some courses. The hours ranges in the POS were adjusted to show this, and the maximum limit was added to the Other Requirements.

4. We revised the Program of Study for the campus concentration project. We moved the Field Education requirement to be last because it's the final set of the degree. We removed "Focus Area" from the elective heading because we don't have focus areas anymore.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

Yes No

Why are these changes necessary?

- 1. Courses in the LSC concentration have been revised and updated to keep relevant to the changing macro social work practices and skills development.
- 2. At the start, in the 1970s the MSW was offered extramurally throughout the state. In 2006 the program was offered primarily in Chicago, and so continued to have an extramural "X code." Due to being required to deliver all iMSW courses online during the covid pandemic we re-evaluated how our iMSW curriculum was being delivered and it was determined that it could be delivered in a fully online model without losing any educational components. This allows our program to meet the needs of students in rural communities.
- 3. This reflects our current practice of the requirements for students entering without a BSW. For them we will waive up to 8 hours of the foundation coursework from Policy or Research or HBSE. So the ranges for those 3 areas were updated to be ranges of 4-8 hours, for transparency. But because students may only waive 8 hours, 8 elective hours of are required. (Which is the same as for the Advanced Standing students.)
- 4. The need to complete this request is a part of the campus concentration transparency project. Also, we moved the elective rows up for transparency because the Field Placement is the last requirement completed. We removed "Focus Area" from the elective heading because we don't have focus areas anymore.

Total minimum hours for the program have not changed.

### 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 this new program/proposed change result in the replacement of another program?

No

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

# Program Regulation and Assessment

# Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

Leadership & Social Change (LSC)

Advanced Student Learning Competencies

- 1. <u>Demonstrate ethical and professional behavior.</u> <u>Students will demonstrate the ability to:</u>
- 1.1 Develop a self-awareness of ethical standards of practice, and identify situations in which personal values, legal standards, and professional expectations may conflict.
- 1.2 Understand the principles identified in the NASW Code of Ethics such as: <a href="limiting">limiting</a> practice to personal areas of competence, boundaries of sharing or withholding confidential information, and resolving ethical dilemmas arising from value conflicts.
- 2. Engage diversity and difference in practice. Students will demonstrate the ability to:
- 2.1 Understand the importance of diversity and diverse perspectives on the development and impact of social policies and programs.
- 2.2 Communicate the importance of diversity and diverse perspectives when conducting social change interventions, whether through advocacy, policy development, or leadership in social service agencies.
- 2.3 Engage diverse populations in advocacy, organizational management, policy development, and coalition building.
- 3. Advance human rights and social, economic, and environmental justice. Students will demonstrate the ability to:
- 3.1 Understand key rights and responsibilities embodied in the United Nations
  Universal Declaration of Human Rights, the United Nations Sustainable Development
  Goals, and the U.S. Constitution, and related documents that advocate for social,
  economic, and environmental justice.
- 3.2 Apply social, economic, and environmental justice principles to the analysis and development of policies and programs.
- <u>4. Engage in practice-informed research and research-informed practice.</u> <u>Students will demonstrate the ability to:</u>
- 4.1. Assess and utilize research evidence and effective practice approaches related to social policy, administration, and advocacy.
- 4.4. Apply needs assessments and other data in the conduct of policy analysis, community development, and program development.
- 4.3 Be able to conduct social program evaluation studies and interpret findings to enhance both service delivery processes and service outcomes.
- 5. Engage in policy practice. Students will demonstrate the ability to:
- <u>5.1.</u> <u>Understand leading societal trends that shape the agendas of governmental officials and others involved in policy development.</u>
- <u>5.2.</u> Be able to critically assess legislative, regulatory, and judicial communications related to social policies.
- <u>5.3.</u> <u>Develop skills in writing brief communications and longer reports on behalf of policy positions.</u>
- <u>6.</u> Engage with individuals, families, groups, organizations, and communities. Students will demonstrate the ability to:
- 6.1 Develop skills required to organize campaigns, build linkages, and develop coalitions with other stakeholders on behalf of social change efforts.
- 6.2 Use empathy, reflection and interpersonal communication skills to effectively engage diverse constituencies in advocacy, policy development, and leadership.

- 7. <u>Assess individuals, families, groups, organizations, and communities.</u> <u>Students will demonstrate the ability to:</u>
- 7.1. Conduct needs assessments to inform policy advocacy and/or program development that address social needs of a group or community.
- 7.2 Identify assessment strategies for improving supervisory and/or organizational effectiveness.
- 7.3 Be able to assess the interests of various stakeholders needed to influence, policy, programs, and social change.
- 8. Intervene with individuals, families, groups, organizations, and communities. Students will demonstrate the ability to:
- 8.1 Understand leadership strategies for effecting social change, whether through advocacy, policy development, or leadership strategies to affect social change.
- 8.2 Develop entrepreneurial approaches to addressing social service needs of oppressed and marginalized groups.
- <u>8.3 Demonstrate grant writing skills for accessing resources that support social change</u> and program improvement.
- <u>9. Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities</u>
- 9.1 Critically evaluate the effectiveness and impact of organizational management, human service programs, community development, social welfare policy, and/or social change interventions.
- 9.2. <u>Disseminate results of evaluation or research (such as written reports or presentations) in order to improve programs and influence policy.</u>

Describe how, when, and where these learning outcomes will be assessed.

### Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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/PublicAdminRules2017.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.

Revised programs <u>LSCRevisionWML.xlsx</u>

Attach a revised Sample Sequence (for undergraduate program) or college-level forms.

Catalog Page Text - Overview Tab

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

The Leadership and Social Change (LSC) concentration prepares social work students to further their careers by developing advanced skills in macro practice. Since the social work profession has a long tradition of working towards improving conditions of disadvantaged populations through advocacy efforts with political officials and others, this concentration will prepare students for macro-level advanced practice. These skills can lead to positions, such as, policy advocate, program director, executive director, political strategist, supervisor, administrator, public service leader, strategic planner, or consultant.

Statement for

Programs of Study Catalog

Requirements for the Master of Social Work with the Leadership and Social

**Change Concentration** 

### Advanced Standing (Entering With a BSW)

Course List

Code Title Hours Methods 12 SOCW 521Leadership and Social Change **SOCW 520** Social Welfare Planning **SOCW 522SW Practice with Communities** SOCW 526Managing Human Service Orgs 4 Policy SOCW 589Social Work and the Law SOCW 584Policy Practice and Advocacy Research 4 SOCW 542 Program Evaluation HBSE SOCW 554Inequalities In A Diverse Society SOCW 510Theories of Diversity, Inequality, and Social Change

SOCW 510Theories of Diversity, Inequality, and Social Change Electives

Field Education 12-24

SOCW 531 Field Practicum and Integrative Seminar I

SOCW 532 Field Practicum and Integrative Seminar II

Total Hours: 44-56

### Other Requirements Entering Without a BSWOther Requirements

Grad Other Degree Requirements

Requirement Description

A concentration is required.

Minimum 500-level Hours Required Overall:36
Minimum GPA: 3.0

**Entering Without a BSW** 

Course List		
Code Title	Hours	
Methods	16	
SOCW 400 Generalist SW Practice Methods		
SOCW 521Leadership and Social Change		
SOCW 520 Social Welfare Planning		
SOCW 522SW Practice with Communities		
SOCW 526 Managing Human Service Orgs		
Policy	4-8	
SOCW 410 Social Welfare Pol and Svcs		
SOCW 589Social Work and the Law		
SOCW 584Policy Practice and Advocacy		
Research	4-8	
SOCW 427 Social Work Research Methods		
SOCW 542Program Evaluation	1.0	
HBSE	4-8	
SOCW 451HBSE I: Human Development		
SOCW 510Theories of Diversity Inaquality and So	sial Change	
SOCW 510Theories of Diversity, Inequality, and So Electives	<del></del>	
Field Education	<u>8</u> 24	
SOCW 531Field Practicum and Integrative Seminar		
SOCW 532Field Practicum and Integrative Seminar		
Electives/Focus Area	4 <del>-8</del>	
Total Hours	64-72	
Other Requirements	0.72	
	ee Requirements	
Requirement	·	Description
A concentration is required.		
Minimum 500-level Hours Required Overall:		48
Minimum GPA:		3.0
A maximum of 8 hours of the Policy, Research or HBS	E credit may be waived if taken as a	<u>n</u>
<u>undergraduate.</u>		

# Program Relationships

Corresponding

Program(s):

Corresponding Program(s)

Social Work, MSW (on campus & online)

# Program Features

Academic Level Graduate

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

Nο

Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)

# **Delivery Method**

This program is

available:

On Campus and Online - 2 program types. Students can receive the entire program either on campus or online. Students can choose to take courses in either modality.

Describe the use of this delivery method:

on campus and online. blended

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

Students that were currently under the old program of study will complete their requirements for the concentration. This program of study will be for those entering Fall 2023 and on.

# Budget

Are there

No

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

Nο

Additional Budget

Information

Attach File(s)

# Financial Resources

How does the unit intend to financially support this proposal?

None

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

No

Attach letters of support

No

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

No additional impact to faculty resources.

# Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

The current Library resources are sufficient with this revision.

### **EP** Documentation

EP Control EP.24.051

Number

Attach

Rollback/Approval

**Notices** 

This proposal

requires HLC

inquiry

# **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook Leadership and Social Change

No

Name

Program Code: 5559

Minor Conc 5559 Degree MSW Major Code Code Code Code

0365

Senate Approval

Date

Senate

Conference

Approval Date

**BOT Approval** 

Date

IBHE Approval Date HLC Approval Date

DOE Approval Date

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer Comments

Mary Lowry (lowry) (04/28/23 4:13 pm): Rollback: See the email I sent. Mary Lowry (lowry) (05/02/23 2:35 pm): Rollback: Please see email

Mary Lowry (lowry) (05/03/23 2:27 pm): Rollback: :)
Mary Lowry (lowry) (05/03/23 2:29 pm): Rollback: .
Mary Lowry (lowry) (05/03/23 2:36 pm): Rollback: .

Mary Lowry (lowry) (05/03/23 4:59 pm): Rollback: Please see 5-3-23 email @5pm

**Allison McKinney (agrindly) (09/06/23 11:47 am):** Rollback: This revision needs to be submitted along with the revision to major degree to request the online delivery method.

Allison McKinney (agrindly) (09/06/23 2:25 pm): Rollback: Please resubmit with the major degree revisions for modality changes.

Brooke Newell (bsnewell) (10/03/23 9:12 am): Rollback: Email sent to Cheryl Mary Lowry (lowry) (10/25/23 4:45 pm): Rollback: Cheryl, please see email from 10-24-23

Mary Lowry (lowry) (11/07/23 10:50 am): Rollback: see email dated 11-7-23 Claire Stewart (clairest) (11/26/23 11:46 am): At present, students enrolled in online programs are not assessed a Library/IT fee as traditional students are. Although current library collections, services and expertise may be sufficient to support such a change, the Library's ability to bear these costs may be impacted by missing or lost fee revenue.

Key: 804

# Courses to the Right in Red are the updated revisions

New text is in green

Advanced Standing (Entering With a BSW)

REVISED Advanced Standing (Entering With a BSW)

	Course List			Course List	
Code	Title	Hours	Code	Title	Hour
ethods		12	Methods		
SOCW 520	Social Welfare Planning		SOCW 520	Social Welfare Planning	
SOCW 521	Leadership and Social Change		SOCW 522	SW Practice with Communities	
SOCW 526	Managing Human Service Orgs	_	SOCW 526	Managing Human Service Orgs	
licy		4	Policy		
SOCW 589	Social Work and the Law		<u>SOCW 584</u>	Policy Practice and Advocacy	
search		4	Research		
SOCW 542	Program Evaluation		SOCW 542	Program Evaluation	
SE	ŭ	4	HBSE	ŭ	
		7	TIDSE		
SOCW 554	Inequalities In A Diverse Society		<u>SOCW 510</u>	Theories of Diversity, Inequality, and Social Change	
			Electives		
eld Education		12-24	Field Education		12
SOCW 531	Field Practicum and Integrative Seminar I		<u>SOCW 531</u>	Field Practicum and Integrative Seminar I	
SOCW 532	Field Practicum and Integrative Seminar II		SOCW 532	Field Practicum and Integrative Seminar II	
ectives	ŭ	8		ŭ	
tal Hours		44-56	Total Hours		44
an flours		44 30	Total Hours		7
ther Requirements			Other Requirement	ts	
concentration is required.			A concentration is required.		
nimum 500-level Hours Required Overall:		36	Minimum 500-level Hours Re	equired Overall:	36
nimum GPA:		3	Minimum GPA:		3
ntering Without a BSW			REVISED Entering	Without a BSW	
intering without a bow					
	Course List		KEVISED LIITEI III g	Course List	
Code	Course List <b>Title</b>	Hours	Code		Hous
		Hours 16	_	Course List	Hou
			Code	Course List	Hou
ethods SOCW 400	Title  Generalist SW Practice Methods		Code Methods SOCW 400	Course List  Title  Generalist SW Practice Methods	Hou
socw 400 Socw 520	Title  Generalist SW Practice Methods  Social Welfare Planning		Code Methods SOCW 400 SOCW 520	Course List  Title  Generalist SW Practice Methods  Social Welfare Planning	Hou
SOCW 520 SOCW 521	Title  Generalist SW Practice Methods  Social Welfare Planning  Leadership and Social Change		Code Methods SOCW 400 SOCW 520 SOCW 522	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities	Hou
thods <u>SOCW 400</u> <u>SOCW 520</u> <u>SOCW 521</u> <u>SOCW 526</u>	Title  Generalist SW Practice Methods  Social Welfare Planning	16	Code Methods SOCW 400 SOCW 520 SOCW 522 SOCW 526	Course List  Title  Generalist SW Practice Methods  Social Welfare Planning	Нои
thods <u>SOCW 400</u> <u>SOCW 520</u> <u>SOCW 521</u> <u>SOCW 526</u> cy	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs		Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526 Policy	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs	Нос
thods <u>SOCW 400</u> <u>SOCW 520</u> <u>SOCW 521</u> <u>SOCW 526</u>	Title  Generalist SW Practice Methods  Social Welfare Planning  Leadership and Social Change	16	Code Methods SOCW 400 SOCW 520 SOCW 522 SOCW 526	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities	Нои
thods SOCW 400 SOCW 520 SOCW 521 SOCW 526 icy SOCW 410	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs	16	Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526 Policy	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs	Нос
thods SOCW 400 SOCW 520 SOCW 521 SOCW 526 icy SOCW 410 SOCW 589	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs	16 8	Code  Methods  SOCW 400  SOCW 520  SOCW 522  SOCW 526  Policy  SOCW 410  SOCW 584	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs	Ног
socw 400 SOCW 520 SOCW 521 SOCW 526 icy SOCW 410 SOCW 589 search	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law	16	Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526  Policy SOCW 410 SOCW 584  Research	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy	Нос
thods SOCW 400 SOCW 520 SOCW 521 SOCW 526 icy SOCW 410 SOCW 589 search SOCW 427	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law  Social Work Research Methods	16 8	Code  Methods  SOCW 400  SOCW 520  SOCW 522  SOCW 526  Policy  SOCW 410  SOCW 584  Research  SOCW 427	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy  Social Work Research Methods	Нос
thods SOCW 400 SOCW 520 SOCW 521 SOCW 526 icy SOCW 410 SOCW 589 earch SOCW 427 SOCW 542	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law	16 8 8	Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526 Policy SOCW 410 SOCW 584 Research SOCW 427 SOCW 542	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy	Нос
thods SOCW 400 SOCW 520 SOCW 521 SOCW 526 cy SOCW 410 SOCW 589 earch SOCW 427 SOCW 542	Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law  Social Work Research Methods Program Evaluation	16 8	Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526  Policy SOCW 410 SOCW 584  Research SOCW 427 SOCW 542  HBSE	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy  Social Work Research Methods Program Evaluation	Нос
socw 400 socw 520 socw 521 socw 526 icy socw 410 socw 589 search socw 427 socw 542 SE	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law  Social Work Research Methods Program Evaluation  HBSE I: Human Development	16 8 8	Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526  Policy SOCW 410 SOCW 584  Research SOCW 427 SOCW 542  HBSE SOCW 451	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy  Social Work Research Methods Program Evaluation  HBSE I: Human Development	
thods SOCW 400 SOCW 520 SOCW 521 SOCW 526 icy SOCW 410 SOCW 589 earch SOCW 427 SOCW 542 SE SOCW 451	Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law  Social Work Research Methods Program Evaluation	16 8 8	Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526 Policy SOCW 410 SOCW 584 Research SOCW 427 SOCW 542 HBSE SOCW 451 SOCW 510	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy  Social Work Research Methods Program Evaluation	
thods SOCW 400 SOCW 520 SOCW 521 SOCW 526 icy SOCW 410 SOCW 589 earch SOCW 427 SOCW 542 SE SOCW 451	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law  Social Work Research Methods Program Evaluation  HBSE I: Human Development	16 8 8	Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526  Policy SOCW 410 SOCW 584  Research SOCW 427 SOCW 542  HBSE SOCW 451	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy  Social Work Research Methods Program Evaluation  HBSE I: Human Development	
socw 400 Socw 520 Socw 521 Socw 526 icy Socw 410 Socw 589 search Socw 427 Socw 542 SE Socw 451	Title  Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law  Social Work Research Methods Program Evaluation  HBSE I: Human Development	16 8 8	Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526 Policy SOCW 410 SOCW 584 Research SOCW 427 SOCW 542 HBSE SOCW 451 SOCW 510	Course List  Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy  Social Work Research Methods Program Evaluation  HBSE I: Human Development	
thods SOCW 400 SOCW 520 SOCW 521 SOCW 526 icy SOCW 410 SOCW 589 search SOCW 427 SOCW 542 SE SOCW 541 SOCW 554	Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law  Social Work Research Methods Program Evaluation  HBSE I: Human Development Inequalities In A Diverse Society	16 8 8	Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526  Policy SOCW 410 SOCW 584  Research SOCW 427 SOCW 542  HBSE SOCW 451 SOCW 510  Electives Field Education	Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy  Social Work Research Methods Program Evaluation  HBSE I: Human Development Theories of Diversity, Inequality, and Social Change	
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ethods	Generalist SW Practice Methods Social Welfare Planning Leadership and Social Change Managing Human Service Orgs  Social Welfare Pol and Svcs Social Work and the Law  Social Work Research Methods Program Evaluation  HBSE I: Human Development Inequalities In A Diverse Society	16 8 8 8	Code  Methods  SOCW 400 SOCW 520 SOCW 522 SOCW 526  Policy SOCW 410 SOCW 584  Research SOCW 427 SOCW 542  HBSE SOCW 451 SOCW 510  Electives Field Education	Title  Generalist SW Practice Methods Social Welfare Planning SW Practice with Communities Managing Human Service Orgs  Social Welfare Pol and Svcs Policy Practice and Advocacy  Social Work Research Methods Program Evaluation  HBSE I: Human Development Theories of Diversity, Inequality, and Social Change	
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Date Submitted: 08/11/23 10:37 am

Viewing: 10KS0156MLA &

# 10KS0155MUP: JP: Landscape Architecture, MLA & Urban Planning, MUP

Last approved: 12/13/22 4:18 pm

Last edit: 01/26/24 7:58 am

Changes proposed by: Nicole Turner

Landscape Architecture, MLA & Urban Planning, MUP

Catalog Pages Using this Program

Proposal Type:

### In Workflow

- 1. U Program Review
- 2. 1569 Committee Chair
- 3. 1733 Committee Chair
- 4. 1569 Head
- 5. 1733 Head
- 6. 1569 Committee Chair
- 7. 1569 Committee Chair
- 8. 1569 Head
- 9. 1569 Head
- 10. KR Dean
- 11. KR Dean
- 12. University Librarian
- 13. Grad\_College
- 14. COTE Programs
- 15. Provost

### 16. Senate EPC

- 17. Senate
- 18. U Senate Conf
- 19. Board of Trustees
- 20. IBHE
- 21. HLC
- 22. DOE
- 23. DMI

# **Approval Path**

- 1. 08/15/23 5:35 pm
  Donna Butler
  (dbutler):
  Approved for U
  Program Review
- 2. 10/15/23 9:01 pm Lori Davis (drlori): Approved for 1569 Committee Chair
- 3. 10/15/23 9:14 pm Andrew Greenlee

	(agreen4):
	Approved for 1733
	Committee Chair
4.	10/26/23 1:05 pm
	David Hays
	(dlhays):
	Approved for 1569
	Head
5.	10/30/23 11:43
	am
	Mark Doussard
	(mdouss1):
	Approved for 1733
	Head
6.	10/31/23 12:49
	pm
	Lori Davis (drlori):
	Approved for 1569
	Committee Chair
7.	10/31/23 12:51
	pm
	Lori Davis (drlori):
	Approved for 1569
	Committee Chair
8.	11/15/23 6:28 pm
	David Hays
	(dlhays):
	Approved for 1569
	Head
9.	11/15/23 6:28 pm
	David Hays
	(dlhays):
	Approved for 1569
	Head
10.	12/01/23 8:52 am
	Nicole Turner
	(nicturn):
	Approved for KR
	Dean
11.	12/01/23 8:52 am
	Nicole Turner
	(nicturn):
	Approved for KR
	Dean
12.	12/01/23 5:11 pm
	Claire Stewart
	(clairest):

Approved for

University Librarian

- 13. 12/18/23 3:02 pm Mary Lowry (lowry): Rollback to KR Dean for Grad\_College
- 14. 12/18/23 3:45 pm Nicole Turner (nicturn): Approved for KR Dean
- 15. 12/18/23 4:24 pm
  Claire Stewart
  (clairest):
  Approved for
  University
  Librarian
- 16. 01/16/24 9:51 am
  Allison McKinney
  (agrindly):
  Approved for
  Grad\_College
- 17. 01/22/24 10:31 am Suzanne Lee (suzannel): Approved for COTE Programs
- 18. 01/25/24 9:23 am
  Brooke Newell
  (bsnewell):
  Approved for
  Provost

# History

1. Dec 13, 2022 by Mary Lowry (lowry)

Joint Program (ex. Master of Public Health & PhD. in Community Health)

This proposal is

for a:

Revision

# Administration Details

Official Program JP: Landscape Architecture, MLA & Urban Planning,

Name MUP

Diploma Title

Sponsor College Fine & Applied Arts

Sponsor <u>Urban & Regional Planning</u> <del>Landscape</del>

Department Architecture

Sponsor Name <u>Marc Doussard</u>

Sponsor Email <u>mdouss1@illinois.edu</u>

College Contact Nicole Turner College Contact

Email

nicturn@illinois.edu

College Budget Greg Anderson

Officer

College Budget <u>gnanders@illinois.edu</u>

Officer Email

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

KR Dean

Does this program have inter-departmental administration?

Yes

Interdisciplinary Colleges and Departments (list other colleges/departments which are involved other than the sponsor chose above)

Please describe the oversight/governance for this program, e.g., traditional departmental/college governance. Inclusion of/roles of elected faculty committees? Inclusion of/roles of any advisory committees.

College Fine & Applied Arts

Department <u>Landscape Architecture</u> <u>Urban & Regional</u>

**Planning** 

Is there an additional department involved in governance?

No

# Proposal Title

Effective Catalog Fall 2023

Term

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Revise the Joint Program in the Master of Landscape Architecture in Landscape Architecture and the Master of Urban Planning in Urban Planning in the College of Fine and Applied Arts and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This JP: MUP and MLA proposal (key 1087) is related to JP proposals for: MUP and MARCH (key 1084), MUP and JD (key 1091), MUP and MPH (key 1056), MUP and related majors (key 1092). It is also related to a MUP revision (key 454) and MLA revision (key 346).

# **Program Justification**

Provide a brief description of what changes are being made to the program.

Copying learning outcomes from MUP and MLA distinct program pages and embedded new revisions to the MUP (key 454) and MLA (346) to bring them into the Joint Program page.

Did the program content change 25% or more in relation to the total credit hours, since the 2020-2021 catalog. (http://catalog.illinois.edu/archivedacademiccatalogs/2020-2021/)

<u>Nc</u>

Why are these changes necessary?

- 1. To align with Graduate College and Office of the Provost expectations for transparency for joint programs.
- 2. In the "other requirements" table, the 500-level hours required for UP was added to align with the regular MUP program.
- 3. Including recently approved or currently in workflow revisions for both the MLA and the MUP
- 4. Clarifying that all MLA students would receive 8 hours counted from UP, so that the total degree hours is 80 for the joint program.

### 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 this new program/proposed change result in the replacement of another program?

No

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

No

# Program Regulation and Assessment

# Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

### MASTER OF URBAN PLANNING

To be consistent with our accreditation requirements, we are using the Knowledge, Skills, and Values identified by the Planning Accreditation Board (PAB) as desired outcomes for planning education.

### A.1. General planning knowledge:

Purpose and Meaning of Planning:

Planning Theory:

Planning Law:

Human Settlements and History of Planning:

The Future:

Global Dimensions of Planning:

A.2. Planning skills:

Research Written, Oral and Graphic Communication:

**Quantitative and Qualitative Methods:** 

<u>Plan Creation and Implementation: is able to use Planning Process Methods:</u>

Leadership:

A.3. Values and ethics

Professional Ethics and Responsibility:

Governance and Participation:

Sustainability and Environmental Quality:

**Growth and Development:** Social Justice:

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### MASTER OF LANDSCAPE ARCHITECTURE

Master of Landscape Architecture students will:

This can be substituted with the learning outcomes of the LAAB Accreditation:

- Knowledge and skills in process, principles, and theories of design in landscape architecture
- Knowledge of histories and theories of the art and science of landscape architecture
- Knowledge of plants, ecosystems, and climate science
- Knowledge of resilience and landscape performance
- Knowledge of the legal context of the landscape architecture profession
- Knowledge of professional practice
- Skills in the application of assessment and analysis of site context and suitability of program, data, and other criteria in site design and planning
- Skills in developing design concepts, material detailing, and construction, including accessibility
- Skills in design communication with diverse audiences, including verbal, visual, and written forms
- Knowledge of construction materials and methods, including the use of specifications, construction techniques, material selections, and preparation of relevant documents
- Knowledge and skills of landform, engineering, and green infrastructure to facilitate ecological design, safety, and accessibility
- Knowledge of landscape performance, including the quantifiable assessment of

benefits of landscape design

- Skills in collaboration, including interdisciplinary teams, and application of knowledge from different disciplines into design
- Knowledge and skills in research theories and methods, research ethics, and the understanding of research as it affects the current and future practice of the profession

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Program
Description and
Requirements
Attach Documents

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

No

Code Title

# 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/PublicAdminRules2017.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.

Revised programs Attach a revised Sample Sequence (for undergraduate program)

or college-level forms.

Catalog Page Text - Overview Tab

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

<u>For additional details and requirements refer to the department's Programs of Study and the Graduate College Handbook.</u>

Statement for Programs of Study Catalog

# Master of Urban Planning in Urban Planning

Course List

Hours

UP 501Planning History and Theory4UP 503Physical Planning4UP 504Urban History and Theory4

Code Title	Hours
UP 505Urban and Regional Analysis	<u>2</u>
<u>UP 510Plan Making</u>	<u>4</u>
<u>UP 511Law and Planning</u>	<u>4</u>
UP 590Professional Internship (reduces the hours needed to graduate by 4)	<u>0</u>
Recommended concentration/electives	<u>32</u>
Non-Thesis Option	
UP 591Capstone Seminar (enrollment required for 0 hours one term & 4 hours or	<u>ıe 4</u>
<u>term)</u>	
<u>UP 598Master's Project (min/max applied toward degree)</u>	<u>4</u>
<u>Thesis Option</u>	
<u>UP 591Capstone Seminar (enrollment required for two semesters)</u>	<u>0</u>
<u>UP 599Thesis Research (min/max applied toward degree)</u>	<u>8</u>
<u>Total Hours</u>	<u>64</u>

# Master of Landscape Architecture in Landscape Architecture: Post-**Professional**

For students who have completed a BLA in an LAAB Accredited Program. Typically completed in 2 years.

<u>5</u>

LA 539 Design Workshop G-II

Additional Seminars and Coursework

Thesis Option	
Course List	
Code Title	Hours
<u>Studio</u>	
LA 533 Planning & Design Studio I	<u>5</u>
LA 534 Design Workshop G-I	<u>5</u>
<u>Thesis</u>	
LA 599 Thesis Research	<u>10</u>
Additional Seminars and Coursework	
<u>LA 482</u> <u>Advanced Communication in Landscape Architecture</u>	<u>4</u>
<u>LA 501</u> <u>Landscape Arch Theory &amp; Prac</u>	<u>4</u>
LA 513 History of World Landscapes	<u>4</u> <u>3</u>
LA 597 Research Design & Methods	<del></del>
Additional Required Electives chosen in consultation with MLA Adviso	<u>'r</u>
Social/Cultural Aspects of Design	
Ecology	
Method T. J. M. C. T. J. M. J. M. C. T. J. M. J.	40
Total Minimum Hours	<u>48</u>
Advanced Studio Option	
Course List	11
Code Title	Hours
Studio	_
LA 533 Planning & Design Studio I	<u>5</u> 5
LA 534 Design Workshop G-I	<u>5</u>
LA 537 Planning & Design Studio II	5

Code	Title	Hours
<u>LA 482</u>	Advanced Communication in Landscape Architecture	<u>4</u>
<u>LA 501</u>	Landscape Arch Theory & Prac	<u>4</u>
<u>LA 513</u>	History of World Landscapes	<u>4</u>
<u>LA 597</u>	Research Design & Methods	<u>3</u>
<u>Addition</u>	nal Required Electives chosen in consultation with MLA Adviso	<u>r</u>
Social/0	Cultural Aspects of Design	
Ecology	/ =	
<u>Method</u>		
Total M	inimum Hours	<u>48</u>

# <u>Master of Landscape Architecture in Landscape Architecture: Pre-</u>

# **Professional**

Title

Code

Method

For students who have not completed a BLA in an LAAB Accredited program, an undergraduate degree in a design field such as Architecture, and students with no design undergraduate degree. Typically completed in 2.5-3 years.

Course List

Hours

The following assuments is magnified of MIA students in the Due Duefoccional decrees and access. These	
The following coursework is required of MLA students in the Pre-Professional degree program. These	3
courses do not count toward the graduate degree.	2
LA 241 Landform Design & Construction	3   3   3   4   4   <u>2 </u>
LA 250 Environmental Site Analysis	<u>3</u>
LA 280 Design Communications I	<u>3</u>
LA 281 Design Communications II	<u>3</u>
LA 342 Site Engineering	<u>4</u>
LA 343 Landscape Construction	<u>4</u>
LA 346 <u>Professional Practice</u>	<u>2</u>
LA 352 Woody Landscape Plants	<u>4</u>
Thesis Option	
Course List	
Code Title Hours	
Studio	
LA 433 Graduate Foundation Studio 5	
LA 433Graduate Foundation Studio5LA 434Graduate Site Design Studio5LA 533Planning & Design Studio I5LA 534Design Workshop G-I5	
LA 533 Planning & Design Studio I 5	
LA 534 Design Workshop G-I 5	
<u>Thesis</u>	
LA 599 Thesis Research 10	
Additional Seminars/Coursework	
<u>LA 452</u> <u>Planting Design</u> <u>3</u>	
LA 482 Advanced Communication in Landscape Architecture 4	
LA 501Landscape Arch Theory & Prac4LA 513History of World Landscapes4	
LA 597 Research Design & Methods 3	
Additional Required Electives chosen in consultation with MLA Advisor	
Social/Cultural Factors in Design	
Ecology	

Code Title	Hours			
Total Minimum Hours	<u>48</u>			
Advanced Studio Option				
Course List				
Code Title	Hours			
Studio	_			
LA 433 Graduate Foundation Studio	<u>5</u>			
<u>LA 434</u> <u>Graduate Site Design Studio</u>	<u>5</u>			
LA 533 Planning & Design Studio I	<u>5</u>			
LA 534 Design Workshop G-I	5 5 5 5 5 5			
<u>LA 537</u> <u>Planning &amp; Design Studio II</u>	<u>5</u>			
<u>LA 539</u> <u>Design Workshop G-II</u>	<u>5</u>			
Additional Seminars/Coursework				
LA 452 Planting Design	<u>3</u>			
LA 482 Advanced Communication in Landscape Architecture	<u>4</u>			
LA 501 Landscape Arch Theory & Prac	<u>4</u>			
LA 513 History of World Landscapes	<u>4</u>			
LA 597 Research Design & Methods	<u>3</u>			
Additional Required Electives chosen in consultation with MLA Advisor	<u> </u>			
Social/Cultural Factors in Design	_			
Ecology				
Method				
Total Minimum Hours	48			
Other Requirements for Joint MLA and MUP degrees	<u></u>			
Grad Other Degree Requiremen	nts			
Requirement		Description		
Other requirements may overlap				
Minimum Hours Required Within the Unit:		<del>24</del>		
Minimum 500-level Hours Required Overall:		<del>18</del>		
Enrollment in each program at least 2 semesters				
Up to 8 hours of UP coursework may be applied to the LA degree at the department's				
<del>discretion.</del>				
If pursuing the thesis option, the thesis committee chair must be ful	<del>l-time in Landscape</del>			
Architecture and one committee member must be from Urban Planni	<del>ing.</del>			
Minimum GPA:		<del>3.0</del>		
Minimum 400-500 level hours within LA		<u>24</u>		
Minimum 500-level hours required overall for MLA		<u>18</u>		
Minimum hours within UP		<u>40</u>		
Minimum 500-level hours required overall for MUP		16 (12 in		
·		UP)		
Up to 8 hours of UP coursework will be applied to the LA degree.				
The MUP capstone requirement may be waived for a thesis complete	d in Landscape			
Architecture provided faculty from both programs participate on the	<u> </u>			
If pursuing the MLA thesis option, the thesis committee chair must be				
Architecture and one committee member must be from Urban Planni	<u> </u>			
Minimum GPA	····	3.0		
Course List		<u>510</u>		
Code Title		Hours		
Title		110013		

Code Title	Hours
<u>Total Minimum Hours</u>	<u>80</u>
Landscape Architecture will count up to 8 hours of Urban Planning courses as electives in meeting its	
48 credit hours of degree requirements as long as the student is required to take no fewer than 40	
additional hours in Landscape Architecture. The two programs must total a minimum of the sum of	
40 Urban Planning hours plus 40 hours for the Master of Landscape Architecture.	
Course List	
Code Title	Hours
Urban Planning core capstone and area requirements	<del>40</del>
LA 470 Course LA 470 Not Found	3
<del>LA 501</del> Landscape Arch Theory & Prac	4
Specialization area coursework	<del>27-35</del>
<u>Internship</u>	
Additional undergraduate coursework will be required of students without a BLA. These prerequisites	
do not count toward the graduate degree.	
LA 599 Thesis Research (min/max applied toward degree)	8
Total Hours	<del>80</del>
Other Requirements	

# Program Relationships

Identify the existing programs to be joined:

Corresponding Program(s)

Landscape Architecture, MLA

Urban Planning, MUP

# Program Features

Academic Level Graduate

What is the typical time to completion of this program?

4 years

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

80

What is the 3.0

required GPA?

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

# **Delivery Method**

This program is available:

On Campus - Students are required to be on campus, they may take some online courses.

# Admission Requirements

**Desired Effective** 

**Admissions Term** 

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

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

No impact.

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

# Budget

Are there

Nο

budgetary

implications for

this revision?

Will the program or revision require staffing (faculty, advisors, etc.)

beyond what is currently available?

No

Additional Budget

Information

Attach File(s)

# Financial Resources

How does the unit intend to financially support this proposal?

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

Attach letters of support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

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

No

Is this program requesting self-supporting status?

No

# Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

No impact.

# Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Library collections, resources and services are sufficient to support this MLA and MUP joint program revision.

### **EP** Documentation

**EP Control** 

EP.24.051

Number

Attach

Rollback/Approval

Notices

This proposal

No

requires HLC

inquiry

# **DMI** Documentation

Attach Final

**Approval Notices** 

Banner/Codebook

MLA:Lndscpe Architecture -UIUC & MUP:Urban Planning -UIUC

Name

Program Code: 10KS0156MLA & 10KS0155MUP

Minor Conc Degree Code Code Code Senate Approval Date Senate Conference Approval Date **BOT Approval** Date **IBHE Approval** Date **HLC Approval** Date **DOE Approval** Date Effective Date:

Program Reviewer Comments

Justification for this request

Attached Document

Mary Lowry (lowry) (07/31/23 4:53 pm): Rollback: please see email dated 7-31-23

Mary Lowry (lowry) (08/10/23 11:33 am): Rollback: Please see email dated 8-10-23

Mary Lowry (lowry) (12/18/23 3:02 pm): Rollback: per email conversation 12-18-23

Key: 1087

Major

Code