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**EP.22.110**
March 7, 2022

**UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE**
COMMITTEE ON EDUCATIONAL POLICY
(Final; Information)

EP.22.110 Report of Administrative Approvals through February 28, 2022

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 February 28, 2022. Additional information for each approval is attached.

**A. Graduate Programs**

1) **MS in Atmospheric Science** (key 38) – revises the list of ATMS courses students in both the Thesis and Non-Thesis options are required to take. There is no change to the total hours required for the program.
2) **PhD in Atmospheric Science** (key 37) – revises the list of ATMS courses students are required to take in the requirements for both students entering with a MS and those entering with a BS. There is no change to the total hours required for the program.
3) **PhD in Mathematics** (key 362) – removes the requirement for demonstrated proficiency in complex analysis. There is no change to the total hours required for the program.
4) **Concentration in Actuarial Science & Risk Analytics within the PhD in Mathematics** (key 362) – removes the requirement for demonstrated proficiency in complex analysis. There is no change to the total hours required for the concentration.

**B. Undergraduate Programs**

1) **BA in Urban Studies & Planning** (key 367) – adds the program's capstone course (1 hour) as a major core requirement, reducing by 1 hour the number of free electives. There is no change to the total hours required for the program.
2) **Minor in Business** (key 462) – moves a footnote statement about prerequisites into the table in parentheses and revises the Elective Courses Requirement. There is no change to the total hours required for the minor.

Date Submitted: 11/18/21 11:15 am

# Viewing: 10KS0334MS : Atmospheric Sciences, MS

Last approved: 04/02/21 3:19 pm

Last edit: 02/23/22 3:10 pm

Changes proposed by: Tammy Warf

| | |
|---|---|
| Catalog Pages Using this Program | Atmospheric Sciences, MS |

Proposal Type:

## In Workflow

1. **U Program Review**
2. **1253 Head**
3. **SESE Head**
4. **KV Dean**
5. **University Librarian**
6. **Grad_College**
7. **Provost**
8. **Senate EPC**
9. Senate
10. U Senate Conf
11. Board of Trustees
12. IBHE
13. HLC
14. DMI

## Approval Path

1. 11/30/21 10:47 am
   Deb Forgacs (dforgacs): Approved for U Program Review
2. 01/12/22 4:13 pm
   Robert J. Trapp (jtrapp): Approved for 1253 Head
3. 01/12/22 4:14 pm
   Jonathan Tomkin (tomkin): Approved for SESE Head
4. 02/08/22 11:49 am
   Stephen Downie (sdownie): Approved for KV Dean
5. 02/08/22 11:52 am
   John Wilkin

(jpwilkin): Approved for University Librarian
6. 02/21/22 1:11 pm Allison McKinney (agrindly): Approved for Grad_College
7. 02/23/22 3:12 pm Kathy Martensen (kmartens): Approved for Provost

## History

1. Jan 17, 2020 by Mary Lowry (lowry)
2. Apr 2, 2021 by Beth McKown (bmckown1)

Major (ex. Special Education)

This proposal is for a:
Revision

## Administration Details

| | |
|---|---|
| Official Program Name | Atmospheric Sciences, MS |
| Sponsor College | Liberal Arts & Sciences |
| Sponsor Department | Atmospheric Sciences |
| Sponsor Name | Sonia Lasher Trapp, Professor and Robert J. ~~Jeff~~ Trapp, Professor ~~Professor, Department Head~~ and Department Head ~~Nicole Riemer, Professor, Associate Head~~ |
| Sponsor Email | jtrapp@illinois.edu; slasher@illinois.edu ~~nriemer@illinois.edu~~ |
| College Contact | Stephen Downie ~~Kelly Ritter~~ |
| College Contact Email | sdownie@illinois.edu ~~ritterk@illinois.edu~~ |
| College Budget Officer | Michael Wellens |

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.*

Tammy Warf

Does this program have inter-departmental administration?

No

## Proposal Title

Effective Catalog Term: Fall 2022

Provide a brief, concise description (not justification) of your proposal.

Administrative approval to revise the MS in Atmospheric Science.

Proposing to change the course requirements for the Master of Sciences in Atmospheric Sciences. The department has voted to offer six core course choices to our graduate students, with any four of the six courses fulfilling the requirement for the MS degree. The department wishes to keep ATMS 500, 505, AND 507 as core course options, but remove ATMS 504 from the list, and add ATMS 510, 511, and ATMS 420 as the other options.

List here any related proposals/revisions and their keys. *Example: This BS proposal (key 567) is related to the Concentration A proposal (key 145) and the Concentration B proposal (key 203).*

## Program Justification

Why are these changes necessary?

Title: Revise the Master of Science in Atmospheric Sciences, in the Department of Atmospheric Sciences, College of Liberal Arts and Sciences.

The faculty met during a retreat to discuss changes to our MS/PhD programs and decided that ATMS 504 was not meeting student needs as a core requirement, and that the current list of courses was too rigid to address the breadth of expertise in our program at the graduate level. Through a faculty survey and a series of additional faculty meetings, the faculty voted to remove ATMS 504 as a core course, and in its place add three other courses, thus allowing the student and their advisor to tailor the core courses for their interests

## 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

CEE 447 - Atmospheric Chemistry

Explain how the inclusion or removal of the courses/subjects listed above impacts the offering departments.

ATMS 420/CEE 447 -- Atmospheric Sciences offers this course, but it is sometimes taught by CEE by coordination with ATMS. CEE graduate students are required to take this course.

Attach letters of support or acknowledgement from other departments.

## 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).

No changes anticipated from current practices. As in our past and current graduate core course offerings, these courses have their own learning objectives, typically to establish both breadth and depth of knowledge in ATMS graduate students. Learning objectives are assessed through homework assignments, projects (papers and/or presentations), and exams. Advisors will oversee the core courses taken by the students, to ensure that they also have sufficient breadth for their areas of specialty. Annual surveys will continue to be administered to graduate students to assess their satisfaction with these changes. ~~The learning objectives and the learning outcome assessment plan remain the same as for our Thesis MS degree.~~

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

No

## Program of Study

*"Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60*

*quarter credit hours) in upper division courses" (source: https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf). For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.*

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

Revised programs: Atmospheric Sciences MS - Proposal for Revised Curricula.pdf; ACADEMIC CATALOG ENTRY Degree Requirements Tab Atmospheric Sciences MS.docx; Atmospheric Sciences MS Comparative Table.docx

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

Catalog Page Text - Overview Tab

Text for Overview tab on 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

# Atmospheric Sciences, MS

## Thesis Option

Course List

| Code | Title | Hours |
|---|---|---|
| Students are required to take 4 of the 6 courses listed below. | | |
| ATMS 420 | Atmospheric Chemistry (ATMS 420 is a required course in CEE) | |
| ATMS 500 | Dynamic Meteorology | |
| ~~ATMS 504~~ | ~~Physical Meteorology~~ | ~~4~~ |
| ATMS 505 | Weather Systems | |
| ATMS 507 | Climate Dynamics | |
| ATMS 510 | Precipitation Physics | |
| ATMS 511 | Atmospheric Radiation | |
| Additional Graduate-level courses in ATMS or approved courses in another discipline | | 8 |
| ATMS 599 | Thesis Research (min/max applied toward degree) | 8 |
| Total Hours | | 32 |

### Other Requirements

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap | |

| Requirement | Description |
|---|---|
| The student is required to write a thesis and give a seminar on his/her thesis research. | |
| Minimum GPA: | 3.0 |

## Non-Thesis Option

Course List

| Code | Title | Hours |
|---|---|---|
| Students are required to take 4 of the 6 courses listed below. | | |
| ATMS 420 | Atmospheric Chemistry | |
| ATMS 500 | Dynamic Meteorology | |
| ~~ATMS 504~~ | ~~Physical Meteorology~~ | ~~4~~ |
| ATMS 505 | Weather Systems | |
| ATMS 507 | Climate Dynamics | |
| ATMS 510 | Precipitation Physics | |
| ATMS 511 | Atmospheric Radiation | |
| Additional Graduate-level courses in ATMS or approved courses in another discipline | | 16 |
| Total Hours | | 32 |

### Other Requirements

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap | |
| Minimum GPA: | 3.0 |

| | |
|---|---|
| Corresponding Degree | MS Master of Science |

## Program Features

| | |
|---|---|
| Academic Level | Graduate |
| Does this major have transcripted concentrations? | No |

What is the typical time to completion of this program?

2.5-3 ~~2~~ years

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

32

| | |
|---|---|
| What is the required GPA? | 3.0 |
| CIP Code | 400401 - Atmospheric Sciences and Meteorology, General. |

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: Fall 2022 ~~2021~~

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.

Applications for admission are encouraged from students with bachelor's degrees in atmospheric sciences, meteorology, physics, mathematics, computer science, geography, engineering, oceanography, and related fields. It is strongly recommended that students who intend to study for advanced degrees in atmospheric sciences know the fundamentals of classical physics and applied mathematics. Applicants whose native language is not English are required to take the English Placement Test if accepted. All applicants are required to submit three letters of reference. ~~No change anticipated~~

Describe how critical academic functions such as admissions and student advising are managed.

No changes from current practices. Admissions are handled by faculty offers to the students through the ATMS Graduate Admissions Committee, consisting of members rotated among the faculty. Student advising is addressed in frequent meetings between the faculty member that made the offer (Advisor) and the student. ~~No change anticipated~~

## Enrollment

Describe how this revision will impact enrollment and degrees awarded.

Enrollment may increase (and thus possibly also degrees awarded) by increasing the breadth of our core course offerings, signaling to potential students that our program allows for more breadth in student specialization. However this was not the main purpose behind the proposed changes.

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 budgetary implications for this revision?
No

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 financial support required.

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

## 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.

Attach File(s)

## 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.

No changes anticipated from current practices.

## 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.

n/a

## EP Documentation

| | |
|---|---|
| EP Control Number | EP.22.110 |
| Attach Rollback/Approval Notices | |
| This proposal requires HLC inquiry | No |

## DMI Documentation

| | |
|---|---|
| Attach Final Approval Notices | |
| Banner/Codebook Name | MS:Atmospheric Sciences -UIUC |
| Program Code: | 10KS0334MS |

| Minor Code | Conc Code | Degree Code | MS | Major Code |
|---|---|---|---|---|
| 0334 | | | | |

| | |
|---|---|
| Senate Approval Date | |
| Senate Conference Approval Date | |
| BOT Approval Date | |
| IBHE Approval Date | |
| HLC Approval Date | |
| Effective Date: | |
| Attached Document Justification for this request | |
| Program Reviewer Comments | **Kathy Martensen (kmartens) (02/23/22 3:09 pm):** administrative approval: doesn't change total hours; doesn't restrict student choice |

Key: 38

**Atmospheric Sciences MS**
Comparative Table of Proposed Changes

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Appendix A

THESIS OPTION:

**Students entering MS Program in Atmospheric Sciences will be required to take 4 of the 6 courses*

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| ATMS 500 | 4 | ATMS 420 * | 4 |
| ATMS 504 | 4 | ATMS 500 * | 4 |
| ATMS 505 | 4 | ATMS 505 * | 4 |
| ATMS 507 | 4 | ATMS 507 * | 4 |
| | | ATMS 510 * | 4 |
| | | ATMS 511 * | 4 |
| Additional Graduate-level courses in ATMS or approved courses in another discipline (excluding | 8 | Additional Graduate-level courses in ATMS or approved courses in another discipline (excluding ATMS 599) | 8 |
| ATMS 599 | 8 | ATMS 599 | 8 |

APPENDIX B

NON-THESIS OPTION:

**Students entering MS Program in Atmospheric Sciences will be required to take 4 of the 6 courses*

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| ATMS 500 | 4 | ATMS 420 * | 4 |
| ATMS 504 | 4 | ATMS 500 * | 4 |
| ATMS 505 | 4 | ATMS 505 * | 4 |
| ATMS 507 | 4 | ATMS 507 * | 4 |
| | | ATMS 510 * | 4 |
| | | ATMS 511 * | 4 |
| Additional Graduate-level courses in ATMS or approved courses in another discipline (excluding ATMS 599) | 16 | Additional Graduate-Level courses in ATMS or approval courses in another discipline | 16 |

# ACADEMIC CATALOG ENTRY – Degree Requirements Tab
# Atmospheric Sciences, MS

**1.A) DEGREE REQUIREMENTS-**

## Thesis Option

***Students entering the MS Program in Atmospheric Sciences starting Fall 2022, are required to take 4 of the 6 courses listed below.**

Course List

| Code | Title | Hours |
|---|---|---|
| ATMS 420 | Atmospheric Chemistry* | 4 |
| ATMS 500 | Dynamic Meteorology* | 4 |
| ATMS 505 | Weather Systems* | 4 |
| ATMS 507 | Climate Dynamics* | 4 |
| ATMS 510 | Precipitation Physics* | 4 |
| ATMS 511 | Atmospheric Radiation* | 4 |
| Additional Graduate-level courses in ATMS or approved courses in another discipline | | 8 |
| ATMS 599 | Thesis Research (min/max applied toward degree) | 8 |
| Total Hours | | 32 |

**Other Requirements**

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap<br>The student is required to write a thesis and give a seminar on his/her thesis research. | |
| Minimum GPA: | 3.0 |

## Non-Thesis Option

***Students entering the non-thesis MS Program in Atmospheric Sciences starting Fall 2022, are required to take 4 of the 6 courses listed below.**

Course List

| Code | Title | Hours |
|---|---|---|
| ATMS 420 | Atmospheric Chemistry* | 4 |
| ATMS 500 | Dynamic Meteorology* | 4 |
| ATMS 505 | Weather Systems* | 4 |
| ATMS 507 | Climate Dynamics* | 4 |
| ATMS 510 | Precipitation Physics* | 4 |
| ATMS 511 | Atmospheric Radiation* | 4 |
| Additional Graduate-level courses in ATMS or approved courses in another discipline | 16 | |
| Total Hours | | 32 |

## Other Requirements

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap | |
| Minimum GPA: | 3.0 |

# Proposal for revised curricula (degree, major, concentration, minor)

**Submit completed proposals via email to Associate Dean Stephen R. Downie (sdownie@illinois.edu). Please obtain Executive Officer and School Director (if applicable) approval via email and forward with the proposal to LAS.**

**Proposal Title:** *Revise the Master of Science in Atmospheric Sciences, in the Department of Atmospheric Sciences, College of Liberal Arts and Sciences.*

**Sponsor(s):** *Sonia Lasher Trapp, Professor and Robert J. Trapp, Professor and Department Head*

**College contact**: Stephen R. Downie, Interim Associate Dean for Curricula and Academic Policy, College of Liberal Arts and Sciences, sdownie@illinois.edu

In addition to the unit sponsor(s), who in the unit should be contacted if the College or campus has questions on the proposal? Tammy Warf

**Does this program have inter-departmental administration?** Yes / No If yes, list department. 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. No.

## PROGRAM DESCRIPTION and JUSTIFICATION

**Proposed effective catalog term:** *Fall 2022*

1) **Provide a brief, concise description of your proposal.** Proposing to change the course requirements for the Master of Sciences in Atmospheric Sciences. The department has voted to offer six core course choices to our graduate students, with any four of the six courses fulfilling the requirement for the MS degree. The department wishes to keep ATMS 500, 505, AND 507 as core course options, but remove ATMS 504 from the list, and add ATMS 510, 511, and ATMS 420 as the other options.

2) **Why are these changes necessary?** Please include how your unit decided to revise this program and highlight of the program objectives when applicable. The faculty met during a retreat to discuss changes to our MS/PhD programs and decided that ATMS 504 was not meeting student needs as a core requirement, and that the current list of courses was too rigid to address the breadth of expertise in our program at the graduate level. Through a faculty survey and a series of additional faculty meetings, the faculty voted to remove ATMS 504 as a core course, and in its place add three other courses, thus allowing the student and their advisor to tailor the core courses for their interests.

3) In addition, please provide an answer as to how your undergraduate degree (120 hours of coursework) will satisfy this requirement: IBHE requires that all degree programs contain at least 40 credit hours in upper division courses. Upper division courses have been described as 300- and 400-level coursework and some 200-level courses in which multiple prerequisites are required. N/A

## INSTRUCTIONAL RESOURCES

**1) 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

**2) Does the program include any required or recommended subjects that are offered by other departments? If yes, please list the courses. Explain how these additional courses will be used by the program and provide letters of support from the departments.** ATMS 420 -- Atmospheric Sciences offers this course, but it is sometimes taught by CEE by coordination with ATMS. CEE graduate students are required to take this course.

## PROGRAM REGULATION & ASSESSMENT

1) **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.
No changes anticipated from current practices. As in our past and current graduate core course offerings, these courses have their own learning objectives, typically to establish both breadth and depth of knowledge in ATMS graduate students. Learning objectives are assessed through homework assignments, projects (papers and/or presentations), and exams. Advisors will oversee the core courses taken by the students, to ensure that they also have sufficient breadth for their areas of specialty. Annual surveys will continue to be administered to graduate students to assess their satisfaction with these changes.

**2) Is the career/profession for graduates of this program regulated by the State of Illinois?** If yes, please describe. No.

## PROGRAM FEATURES

**1) Will specialized accreditation be sought for this program?** Yes / No If yes, describe plans for seeking accreditation. No

**2) If a proposal for a concentration-**

**will you admit to the concentration directly?** No

**is a concentration required for graduation?** No

**3) If a proposal for a Minor-** N/A

**Is this minor:**

- o A comprehensive study in a single discipline
- o An interdisciplinary study focusing on a single theme
- o Exception

**Other than certification via the students' degree audits, is there any additional planned mechanism to award/honor successful completion of the minor?**

**4) What is the typical time to completion of this program? (majors and grad programs only) 2.5-3 years**

*Note: grad certificates require at least 10 weeks. Other examples: BALAS= 4years, MA=2.5 years*

**5) What are the minimum Total Credit Hours required for this program? (majors and grad programs only)** 32

**6) For Grad Programs only: What is the required GPA?** 3.0

## DELIVERY METHOD

**What is the program's primary delivery method, choose from following?**

On campus – Students are required to be on campus, they may take some online courses;

***Describe the use of this delivery method:** No changes from current practices: lecture-based, in-person courses that meet on typical MWF or TTh schedules for an entire semester.

## ADMISSION REQUIREMENTS (grad programs and undergraduate majors)

**1) Desired admissions term:**

**Is this revision a change to the admission status of the program?** *No*

2) 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. (degrees, majors, concentrations ONLY)

Applications for admission are encouraged from students with bachelor's degrees in atmospheric sciences, meteorology, physics, mathematics, computer science, geography, engineering, oceanography, and related fields. It is strongly recommended that students who intend to study for advanced degrees in atmospheric sciences know the fundamentals of classical physics and applied mathematics. Applicants whose native language is not English are required to take the English Placement Test if accepted. All applicants are required to submit three letters of reference.

**3) Describe how critical academic functions such as admissions and student advising are managed.**

No changes from current practices. Admissions are handled by faculty offers to the students through the ATMS Graduate Admissions Committee, consisting of members rotated among the faculty. Student advising is addressed in frequent meetings between the faculty member that made the offer (Advisor) and the student.

## ENROLLMENT (grad programs and undergraduate majors)

**1) Describe how this revision will impact enrollment and degrees awarded.**

Enrollment may increase (and thus possibly also degrees awarded) by increasing the breadth of our core course offerings, signaling to potential students that our program allows for more breadth in student specialization. However this was not the main purpose behind the proposed changes.

**2)** Estimated Annual Number of Degrees Awarded

**Year 1: 13**

**Year 5 (or when fully implemented): 15**

**3) What is the matriculation term for this program?** Fall

## ENROLLMENT (minors only)

Will the department limit enrollment to the minor Y/N? if yes, please explain

Describe how the department will monitor the admission to/enrollment in the minor.

Are there any prerequisites for the minor?

Describe how this revision will impact enrollment and degrees awarded.

## BUDGET

**1) Please describe any budgetary implications for this revision- addressing applicable personnel, facilities, technology and supply costs.**

No budgetary implications are anticipated, as no new courses are being offered for the proposed changes.

**2) Will the revision require staffing (faculty, advisors, etc.) beyond what is currently available?** If yes, please describe. No.

**3) Please provide any additional budget information needed to effectively evaluate the proposal. N/A**

## FINANCIAL RESOURCES

**1) How does the unit intend to financially support this proposal?**
No change in financial support will be needed.

**2) Will the unit need to seek campus or other external resources? If yes, please provide a summary of the sources and an indication of the approved support.** No

**3) 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)** (degrees, majors, concentrations ONLY) *If this program requires a tuition or differential change, initiate a discussion with the LAS curricula contact, LAS budget officer, and LAS Associate Dean. N/A*

**4) Are you seeking a change in the tuition rate or differential for this program Y/N? If yes, please explain.** No

## RESOURCE IMPLICATIONS

**1) Facilities- Will the program require new or additional facilities or significant improvements to already existing facilities?** No

**2) Technology- Will the program need additional technology beyond what is currently available for the unit?** No

**3) 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 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.***

**1) 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.**
No changes anticipated from current practices.

**2) 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.** N/A

## ACADEMIC CATALOG ENTRY

**1) All academic catalog entries contain 2 tabs: *Overview* and *Degree Requirements*. All proposal revisions will include updates to the *Degree Requirements* tab- which notes the major requirements (courses, hours) for the proposed curricula. Please see the University of Illinois Academic Catalog- http://catalog.illinois.edu/ for your unit for an example of the entry. Below, provide the updated degree requirements, using the current entry as a model.**

**1.A) DEGREE REQUIREMENTS-**

## Thesis Option

## *Students entering the MS Program in Atmospheric Sciences starting Fall 2022, are required to take 4 of the 6 courses listed below.

Course List

| Code | Title | Hours |
|---|---|---|
| ATMS 420 | Atmospheric Chemistry* | 4 |
| ATMS 500 | Dynamic Meteorology* | 4 |
| ATMS 505 | Weather Systems* | 4 |
| ATMS 507 | Climate Dynamics* | 4 |
| ATMS 510 | Precipitation Physics* | 4 |
| ATMS 511 | Atmospheric Radiation* | 4 |
| Additional Graduate-level courses in ATMS or approved courses in another discipline | | 8 |
| ATMS 599 | Thesis Research (min/max applied toward degree) | 8 |
| Total Hours | | 32 |

**Other Requirements**

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap<br>The student is required to write a thesis and give a seminar on his/her thesis research. | |
| Minimum GPA: | 3.0 |

## Non-Thesis Option

***Students entering the non-thesis MS Program in Atmospheric Sciences starting Fall 2022, are required to take 4 of the 6 courses listed below.**

Course List

| Code | Title | Hours |
|---|---|---|
| ATMS 420 | Atmospheric Chemistry* | 4 |
| ATMS 500 | Dynamic Meteorology* | 4 |
| ATMS 505 | Weather Systems* | 4 |
| ATMS 507 | Climate Dynamics* | 4 |
| ATMS 510 | Precipitation Physics* | 4 |
| ATMS 511 | Atmospheric Radiation* | 4 |
| Additional Graduate-level courses in ATMS or approved courses in another discipline | 16 | |
| Total Hours | | 32 |

## Other Requirements

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap | |
| Minimum GPA: | 3.0 |

**1.B) If updates are needed for the Overview tab, please include those here-**

**2) Include a comparative table of the current and proposed requirements.**

# Appendix A

## THESIS OPTION:

**Students entering MS Program in Atmospheric Sciences will be required to take 4 of the 6 courses*

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| ATMS 500 | 4 | ATMS 420 * | 4 |
| ATMS 504 | 4 | ATMS 500 * | 4 |
| ATMS 505 | 4 | ATMS 505 * | 4 |
| ATMS 507 | 4 | ATMS 507 * | 4 |
| | | ATMS 510 * | 4 |
| | | ATMS 511 * | 4 |
| Additional Graduate-level courses in ATMS or approved courses in another discipline (excluding | 8 | Additional Graduate-level courses in ATMS or approved courses in another discipline (excluding ATMS 599) | 8 |
| ATMS 599 | 8 | ATMS 599 | 8 |

# APPENDIX B

NON-THESIS OPTION:

**Students entering MS Program in Atmospheric Sciences will be required to take 4 of the 6 courses*

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| ATMS 500 | 4 | ATMS 420 * | 4 |
| ATMS 504 | 4 | ATMS 500 * | 4 |
| ATMS 505 | 4 | ATMS 505 * | 4 |
| ATMS 507 | 4 | ATMS 507 * | 4 |
| | | ATMS 510 * | 4 |
| | | ATMS 511 * | 4 |
| Additional Graduate-level courses in ATMS or approved courses in another discipline (excluding ATMS 599) | 16 | Additional Graduate-Level courses in ATMS or approval courses in another discipline | 16 |

Date Submitted: 02/07/22 11:55 am

# Viewing: 10KS0334PHD : Atmospheric Sciences, PhD

Last approved: 01/17/20 12:18 pm

Last edit: 02/23/22 3:13 pm

Changes proposed by: Andrea Ray

| | |
|---|---|
| Catalog Pages Using this Program | Atmospheric Sciences, PhD |

Proposal Type:

## In Workflow

1. **U Program Review**
2. **1253 Head**
3. **SESE Head**
4. **KV Dean**
5. **University Librarian**
6. **Grad_College**
7. **Provost**
8. **Senate EPC**
9. Senate
10. U Senate Conf
11. Board of Trustees
12. IBHE
13. HLC
14. DMI

## Approval Path

1. 02/07/22 12:31 pm
   Deb Forgacs (dforgacs): Approved for U Program Review
2. 02/08/22 6:03 am
   Robert J. Trapp (jtrapp): Approved for 1253 Head
3. 02/08/22 9:20 am
   Jonathan Tomkin (tomkin): Approved for SESE Head
4. 02/08/22 11:50 am
   Stephen Downie (sdownie): Approved for KV Dean
5. 02/08/22 11:52 am
   John Wilkin

(jpwilkin): Approved for University Librarian
6. 02/21/22 1:12 pm Allison McKinney (agrindly): Approved for Grad_College
7. 02/23/22 3:15 pm Kathy Martensen (kmartens): Approved for Provost

## History

1. Jan 17, 2020 by Mary Lowry (lowry)

Major (ex. Special Education)

This proposal is for a:
Revision

## Administration Details

| | |
|---|---|
| Official Program Name | Atmospheric Sciences, PhD |
| Sponsor College | Liberal Arts & Sciences |
| Sponsor Department | Atmospheric Sciences |
| Sponsor Name | Sonia Lasher Trapp, Professor and Robert J. Trapp, Professor and Department Head |
| Sponsor Email | slasher@illinois.edu; jtrapp@illinois.edu |
| College Contact | Stephen R. Downie |
| College Contact Email | sdownie@illinois.edu |
| College Budget Officer | Michael Wellens |
| 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.*

Tammy Warf

Does this program have inter-departmental administration?

No

## Proposal Title

Effective Catalog Term: Fall 2022

Provide a brief, concise description (not justification) of your proposal.

Administrative approval to revise the PhD in Atmospheric Science

Proposing to change the course requirements for the Doctor of Philosophy in Atmospheric Sciences. The department has voted to offer six core course choices to our graduate students, with any five of the six courses fulfilling the requirement for the Ph.D. degree. The department wishes to keep ATMS 500, 505, and 507 as core course options, but remove ATMS 504 from the list, and add ATMS 510, 511, and ATMS 420 as the other options.

List here any related proposals/revisions and their keys. *Example: This BS proposal (key 567) is related to the Concentration A proposal (key 145) and the Concentration B proposal (key 203).*

## Program Justification

Why are these changes necessary?

Title: Revise the Doctor of Philosophy in Atmospheric Sciences, Department of Atmospheric Sciences, College of Liberal Arts and Sciences.

The faculty met during a retreat to discuss changes to our MS/PhD programs and decided that ATMS 504 was not meeting student needs as a core requirement, and that the current list of courses was too rigid to address the breadth of expertise in our program at the graduate level. Through a faculty survey and a series of additional faculty meetings, the faculty voted to remove ATMS 504 as a core course, and in its place add three other courses, thus allowing the student and their advisor to tailor the core courses for their interests.

## 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

CEE 447 - Atmospheric Chemistry

Explain how the inclusion or removal of the courses/subjects listed above impacts the offering departments.

ATMS 420/CEE 447 -- Atmospheric Sciences offers this course, but it is sometimes taught by CEE by coordination with ATMS. CEE graduate students are required to take this course.

Attach letters of support or acknowledgement from other departments.

## 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).

No changes anticipated from current practices. As in our past and current graduate core course offerings, these courses have their own learning objectives, typically to establish both breadth and depth of knowledge in ATMS graduate students. Learning objectives are assessed through homework assignments, projects (papers and/or presentations), and exams. Advisors will oversee the core courses taken by the students, to ensure that they also have sufficient breadth for their areas of specialty. Annual surveys will continue to be administered to graduate students to assess their satisfaction with these changes.

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

No

## Program of Study

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

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

| | |
|---|---|
| Revised programs | Atmospheric Sciences PhD Comparative Table.docx<br>Atmospheric Sciences PhD - Proposal for Revised Curricula.doc<br>ACADEMIC CATALOG ENTRY Degree Requirements Tab Atmospheric Sciences PhD.docx |

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

Catalog Page Text - Overview Tab

Text for Overview tab on 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

# Atmospheric Sciences, PhD

## Entering with approved B.S. (Direct to Ph.D.)

Course List

| Code | Title | Hours |
|---|---|---|
| *Students are required to take 5 of the 6 courses listed below: | | |
| ATMS 420 | Atmospheric Chemistry (*) | |
| ATMS 500 | Dynamic Meteorology (*) | |
| ~~ATMS 504~~ | ~~Physical Meteorology~~ | ~~4~~ |
| ATMS 505 | Weather Systems (*) | |
| ATMS 507 | Climate Dynamics (*) | |
| ATMS 510 | Precipitation Physics (*) | |
| ATMS 511 | Atmospheric Radiation (*) | |
| ATMS 599 | Thesis Research | 16 |
| ~~Additional approved graduate level courses (excluding ATMS 599)~~ | | ~~32~~ |
| Additional approved graduate level courses** (excluding ATMS 599) | | 28 |
| Additional approved graduate level courses (including ATMS 599) | | 32 |
| Total Hours | | 96 |

## Entering with an approved M.S. degree

Course List

| Code | Title | Hours |
|---|---|---|
| Stage I Equivalent (32 Hours) Satisfied by previous Masters degree (from either within the ATMS department or an approved MS from outside the ATMS department) | | |

| Code | Title | Hours |
|---|---|---|
| *Students are required to take 5 of the 6 courses listed if not completed during their M.S. degree. | | |
| ATMS 420 | Atmospheric Chemistry (*) | |
| ATMS 500 | Dynamic Meteorology (*) | |
| ATMS 505 | Weather Systems (*) | |
| ATMS 507 | Climate Dynamics (*) | |
| ATMS 510 | Precipitation Physics (*) | |
| ATMS 511 | Atmospheric Radiation (*) | |
| ATMS 599 | Thesis Research | 16 |
| Additional approved graduate level courses** (excluding ATMS 599) | | 24 |
| Additional approved graduate level courses (including ATMS 599) | | 24 |
| **If the previous MS degree was earned outside of the Atmospheric Sciences department, these courses must include ATMS 420, ATMS 500, ATMS 505, ATMS 507, ATMS 510, and ATMS 511, if equivalent courses were not taken as part of the student's M.S. degree. Equivalency will be determined by the department after review of the course syllabi. | | |
| Total Hours | | 64 |

## Graduate Other Degree Requirements

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap | |
| Qualifying Exam Required | No |
| Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes |
| Minimum GPA: | 3.0 |

| | |
|---|---|
| Corresponding Degree | PhD Doctor of Philosophy |

## Program Features

| | |
|---|---|
| Academic Level | Graduate |
| Does this major have transcripted concentrations? | No |

What is the typical time to completion of this program?

5 years

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

96

| | |
|---|---|
| What is the required GPA? | 3.0 |
| CIP Code | 400401 - Atmospheric Sciences and Meteorology, General. |

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: Fall 2022

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.

Applications for admission are encouraged from students with M.S. degrees in atmospheric sciences, meteorology, physics, mathematics, computer science, geography, engineering, oceanography, and related fields. It is strongly recommended that students who intend to study for advanced degrees in atmospheric sciences know the fundamentals of classical physics and applied mathematics. Applicants whose native language is not English are required to take the English Placement Test if accepted. All applicants are required to submit three letters of reference.

Describe how critical academic functions such as admissions and student advising are managed.

No changes from current practices. Admissions are handled by faculty offers to the students through the ATMS Graduate Admissions Committee, consisting of members rotated among the faculty. Student advising is addressed in frequent meetings between the faculty member that made the offer (Advisor) and the student.

## Enrollment

Describe how this revision will impact enrollment and degrees awarded.

Enrollment may increase (and thus possibly also degrees awarded) by increasing the breadth of our core course offerings, signaling to potential students that our program allows for more breadth in student specialization. However, this was not the main purpose behind the proposed changes.

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 budgetary implications for this revision?
No

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 change in financial support will be needed.

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

## 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.

Attach File(s)

## 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.

No changes anticipated from current practices.

## 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.

Current collections and services are adequate for the proposed program.

## EP Documentation

| | |
|---|---|
| EP Control Number | EP.22.110 |
| Attach Rollback/Approval Notices | |
| This proposal requires HLC inquiry | No |

## DMI Documentation

| | |
|---|---|
| Attach Final Approval Notices | |
| Banner/Codebook Name | PHD:Atmospheric Sciences -UIUC |
| Program Code: | 10KS0334PHD |

| Minor Code | Conc Code | Degree Code | PHD | Major Code |
| --- | --- | --- | --- | --- |
| 0334 | | | | |

Senate Approval Date

Senate Conference Approval Date

BOT Approval Date

IBHE Approval Date

HLC Approval Date

Effective Date:

Attached Document

Justification for this request

Program Reviewer Comments

**Deb Forgacs (dforgacs) (01/06/22 3:58 pm):** Rollback: requested.

**Allison McKinney (agrindly) (02/21/22 1:12 pm):** Approved administratively by the Graduate College.

**Kathy Martensen (kmartens) (02/23/22 3:13 pm):** Administrative approval: Doesn't change total hours required; doesn't restrict student choice.

Key: 37

ILLINOIS

# Proposal for revised curricula (degree, major, concentration, minor)

**Submit completed proposals via email to Associate Dean Stephen R. Downie (sdownie@illinois.edu). Please obtain Executive Officer and School Director (if applicable) approval via email and forward with the proposal to LAS.**

**Proposal Title:** *Revise the Doctor of Philosophy in Atmospheric Sciences, in the Department of Atmospheric Sciences, College of Liberal Arts and Sciences.*

**Sponsor(s):** *Sonia Lasher Trapp, Professor and Robert J. Trapp, Professor and Department Head*

**College contact**: Stephen R. Downie, Interim Associate Dean for Curricula and Academic Policy, College of Liberal Arts and Sciences, sdownie@illinois.edu

In addition to the unit sponsor(s), who in the unit should be contacted if the College or campus has questions on the proposal? Tammy Warf

**Does this program have inter-departmental administration?** Yes / No If yes, list department. 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. No.

## PROGRAM DESCRIPTION and JUSTIFICATION

**Proposed effective catalog term:** *Fall 2022*

1) **Provide a brief, concise description of your proposal.** Proposing to change the course requirements for the Doctor of Philosophy in Atmospheric Sciences. The department has voted to offer six core course choices to our graduate students, with any five of the six courses fulfilling the requirement for the Ph.D. degree. The department wishes to keep ATMS 500, 505, and 507 as core course options, but remove ATMS 504 from the list, and add ATMS 510, 511, and ATMS 420 as the other options.

2) **Why are these changes necessary?** Please include how your unit decided to revise this program and highlight of the program objectives when applicable. The faculty met during a retreat to discuss changes to our MS/PhD programs and decided that ATMS 504 was not meeting student needs as a core requirement, and that the current list of courses was too rigid to address the breadth of expertise in our program at the graduate level. Through a faculty survey and a series of additional faculty meetings, the faculty voted to remove ATMS 504 as a core course, and in its place add three other courses, thus allowing the student and their advisor to tailor the core courses for their interests.

3) In addition, please provide an answer as to how your undergraduate degree (120 hours of coursework) will satisfy this requirement: IBHE requires that all degree programs contain at least 40 credit hours in upper division courses. Upper division courses have been described as 300- and 400-level coursework and some 200-level courses in which multiple prerequisites are required. N/A

## INSTRUCTIONAL RESOURCES

**1) 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

**2) Does the program include any required or recommended subjects that are offered by other departments? If yes, please list the courses. Explain how these additional courses will be used by the program and provide letters of support from the departments.** ATMS 420 -- Atmospheric Sciences offers this course, but it is sometimes taught by CEE by coordination with ATMS. CEE graduate students are required to take this course.

## PROGRAM REGULATION & ASSESSMENT

1) **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.

No changes anticipated from current practices. As in our past and current graduate core course offerings, these courses have their own learning objectives, typically to establish both breadth and depth of knowledge in ATMS graduate students. Learning objectives are assessed through homework assignments, projects (papers and/or presentations), and exams. Advisors will oversee the core courses taken by the students, to ensure that they also have sufficient breadth for their areas of specialty. Annual surveys will continue to be administered to graduate students to assess their satisfaction with these changes.

**2) Is the career/profession for graduates of this program regulated by the State of Illinois?** If yes, please describe. No.

## PROGRAM FEATURES

**1) Will specialized accreditation be sought for this program?** No

**2) If a proposal for a concentration-**

**will you admit to the concentration directly?** No

**is a concentration required for graduation?** No

**3) If a proposal for a Minor-** N/A

**Is this minor:**

- A comprehensive study in a single discipline
- An interdisciplinary study focusing on a single theme
- Exception

**Other than certification via the students' degree audits, is there any additional planned mechanism to award/honor successful completion of the minor?**

**4) What is the typical time to completion of this program? (majors and grad programs only) 5 years**

*Note: grad certificates require at least 10 weeks. Other examples: BALAS= 4years, MA=2.5 years*

**5) What are the minimum Total Credit Hours required for this program? (majors and grad programs only)** 96

**6) For Grad Programs only: What is the required GPA?** 3.0

## DELIVERY METHOD

**What is the program's primary delivery method, choose from following?**

On campus – Students are required to be on campus, they may take some online courses;

*Describe the use of this delivery method: **No changes from current practices: lecture-based, in-person courses that meet on typical MWF or T/Th schedules for an entire semester.**

## ADMISSION REQUIREMENTS (grad programs and undergraduate majors)

**1) Desired admissions term:**

**Is this revision a change to the admission status of the program?** *No*

2) 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. (degrees, majors, concentrations ONLY)

Applications for admission are encouraged from students with M.S. degrees in atmospheric sciences, meteorology, physics, mathematics, computer science, geography, engineering, oceanography, and related fields. It is strongly recommended that students who intend to study for advanced degrees in atmospheric sciences know the fundamentals of classical physics and applied mathematics. Applicants whose native language is not English are required to take the English Placement Test if accepted. All applicants are required to submit three letters of reference.

**3) Describe how critical academic functions such as admissions and student advising are managed.**

No changes from current practices. Admissions are handled by faculty offers to the students through the ATMS Graduate Admissions Committee, consisting of members rotated among the faculty. Student advising is addressed in frequent meetings between the faculty member that made the offer (Advisor) and the student.

## ENROLLMENT (grad programs and undergraduate majors)

**1) Describe how this revision will impact enrollment and degrees awarded.**

Enrollment may increase (and thus possibly also degrees awarded) by increasing the breadth of our core course offerings, signaling to potential students that our program allows for more breadth in student specialization. However, this was not the main purpose behind the proposed changes.

**2)** Estimated Annual Number of Degrees Awarded

**Year 1: 13**

**Year 5 (or when fully implemented): 15**

**3) What is the matriculation term for this program?** Fall

## ENROLLMENT (minors only)

Will the department limit enrollment to the minor Y/N? if yes, please explain

Describe how the department will monitor the admission to/enrollment in the minor.

Are there any prerequisites for the minor?

Describe how this revision will impact enrollment and degrees awarded.

## BUDGET

**1) Please describe any budgetary implications for this revision- addressing applicable personnel, facilities, technology and supply costs.**

No budgetary implications are anticipated, as no new courses are being offered for the proposed changes.

**2) Will the revision require staffing (faculty, advisors, etc.) beyond what is currently available?** If yes, please describe. No.

**3) Please provide any additional budget information needed to effectively evaluate the proposal. N/A**

## FINANCIAL RESOURCES

**1) How does the unit intend to financially support this proposal?**
No change in financial support will be needed.
**2) Will the unit need to seek campus or other external resources? If yes, please provide a summary of the sources and an indication of the approved support.** No

**3) 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)** (degrees, majors, concentrations ONLY) *If this program requires a tuition or differential change, initiate a discussion with the LAS curricula contact, LAS budget officer, and LAS Associate Dean. N/A*

**4) Are you seeking a change in the tuition rate or differential for this program Y/N? If yes, please explain.** No

## RESOURCE IMPLICATIONS

**1) Facilities- Will the program require new or additional facilities or significant improvements to already existing facilities?** No

**2) Technology- Will the program need additional technology beyond what is currently available for the unit?** No

**3) 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 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.***

**1) 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.**
No changes anticipated from current practices.

**2) 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.** Current collections and services are adequate for the proposed program.

## ACADEMIC CATALOG ENTRY

**1) All academic catalog entries contain 2 tabs: *Overview* and *Degree Requirements*. All proposal revisions will include updates to the *Degree Requirements* tab- which notes the major requirements (courses, hours) for the proposed curricula. Please see the University of Illinois Academic Catalog- http://catalog.illinois.edu/ for your unit for an example of the entry. Below, provide the updated degree requirements, using the current entry as a model.**

**1.A) DEGREE REQUIREMENTS-**

# Atmospheric Sciences, PhD

## Entering with approved B.S. (Direct to Ph.D.)

### *Students entering the PhD Program in Atmospheric Sciences starting Fall 2022, are required to take 5 of the 6 courses listed below.

List

| Code | Title | Hours |
|---|---|---|
| ATMS 500 | Dynamic Meteorology* | 4 |
| ATMS 505 | Weather Systems* | 4 |
| ATMS 507 | Climate Dynamics* | 4 |
| ATMS 510 | Precipitation Physics* | 4 |
| ATMS 511 | Atmospheric Radiation* | 4 |
| ATMS 420 | Atmospheric Chemistry* | 4 |
| ATMS 599 | Thesis Research | 16 |
| Additional approved graduate level courses (excluding ATMS 599) | | 28 |
| Additional approved graduate level courses (including ATMS 599) | | 32 |
| Total Hours | | 96 |

## Entering with an approved M.S. degree

Course List

| Code | Title | Hours |
|---|---|---|
| Stage I Equivalent (32 Hours) Satisfied by previous Master's degree (from either within the ATMS department or an approved MS from outside the ATMS department) *Students entering the PhD Program in Atmospheric Sciences starting Fall 2022, are required to take at least 5 of the 6 courses listed below if not completed during their M.S. degree. | | 32 |
| ATMS 599 | Thesis Research | 16 |
| Additional approved graduate level courses** (excluding ATMS 599) | | 24 |
| Additional approved graduate level courses (including ATMS 599) | | 24 |
| **If the previous MS degree was earned outside of the Atmospheric Sciences department, these courses must include five of the following six courses: ATMS 420, ATMS 500, ATMS 505, ATMS 507, ATMS 510 and ATMS 511, if equivalent courses were not taken as part of the student's M.S. degree. Equivalency will be determined by the department after review of the course syllabi. | | |
| Total Hours | | 64 |

**Other Requirements**

Graduate Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap | |
| Qualifying Exam Required | No |
| Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes |
| Minimum GPA: | 3.0 |

**1.B) If updates are needed for the Overview tab, please include those here-**

**2) Include a comparative table of the current and proposed requirements.**

Comparative Table of Proposed Changes

---

Appendix A

ENTERING WITH APPROVED B.S. (DIRECT TO PH.D.):

***Students entering the PhD Program in Atmospheric Sciences starting Fall 2022, are required to take 5 of the 6 courses listed below.***

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| ATMS 500 | 4 | ATMS 420 * | 4 |
| ATMS 504 | 4 | ATMS 500 * | 4 |
| ATMS 505 | 4 | ATMS 505 * | 4 |
| ATMS 507 | 4 | ATMS 507 * | 4 |
| | | ATMS 510 * | 4 |
| | | ATMS 511 * | 4 |
| Additional approved graduate level courses (excluding ATMS 599) | 32 | Additional approved graduate level courses** (excluding ATMS 599) | 28 |
| Additional approved graduate | 32 | Additional approved graduate | 32 |

| | | | |
|---|---|---|---|
| level courses (including ATMS 599) | | level courses (including ATMS 599) | |
| ATMS 599 | 16 | ATMS 599 | 16 |
| **Total Hours** | | | **96** |

# APPENDIX B

## ENTERING WITH AN APPROVED M.S. DEGREE:

***Students entering the PhD Program in Atmospheric Sciences starting Fall 2022, are required to take at least 5 of the 6 courses listed below if not completed during their M.S. degree.**

| Stage 1 Equivalent (32 Hours) Satisfied by previous Master's degree (from either within the ATMS department or an approved MS from outside the ATMS department) | | | |
|---|---|---|---|
| **Current Requirements** | **Current Hours** | **Proposed Requirements** | **Proposed Hours** |
| ATMS 500 | 4 | ATMS 420* | 4 |
| ATMS 504 | 4 | ATMS 500* | 4 |
| ATMS 505 | 4 | ATMS 505* | 4 |
| ATMS 507 | 4 | ATMS 507* | 4 |
| | | ATMS 510* | 4 |
| | | ATMS 511* | 4 |
| Additional approved graduate level courses (excluding ATMS 599) | 24 | Additional approved graduate level courses** (excluding ATMS 599) | 24 |
| Additional approved graduate level courses (including ATMS 599) | 24 | Additional approved graduate level courses (including ATMS 599) | 24 |
| ATMS 599 | 16 | ATMS 599 | 16 |
| **Total Hours** | | | **64** |

**If the previous MS degree was earned outside of the Atmospheric Sciences department, these courses must include five of the following six courses: ATMS 420, ATMS 500, ATMS 505, ATMS 507, ATMS 510 and ATMS 511, if equivalent courses were not taken as part of the student's M.S. degree. Equivalency will be determined by the department after review of the course syllabi.

## ACADEMIC CATALOG ENTRY – Degree Requirements Tab
## Atmospheric Sciences, PhD

**1.A) DEGREE REQUIREMENTS-**

# Atmospheric Sciences, PhD

### Entering with approved B.S. (Direct to Ph.D.)

### *Students entering the PhD Program in Atmospheric Sciences starting Fall 2022, are required to take 5 of the 6 courses listed below.

List

| Code | Title | Hours |
|---|---|---|
| ATMS 500 | Dynamic Meteorology* | 4 |
| ATMS 505 | Weather Systems* | 4 |
| ATMS 507 | Climate Dynamics* | 4 |
| ATMS 510 | Precipitation Physics* | 4 |
| ATMS 511 | Atmospheric Radiation* | 4 |
| ATMS 420 | Atmospheric Chemistry* | 4 |
| ATMS 599 | Thesis Research | 16 |
| Additional approved graduate level courses** (excluding ATMS 599) | | 28 |
| Additional approved graduate level courses (including ATMS 599) | | 32 |
| **Total Hours** | | **96** |

### Entering with an approved M.S. degree

***Students entering the PhD Program in Atmospheric Sciences starting Fall 2022, are required to take at least 5 of the 6 courses listed if not completed during their M.S. degree.**

Course List

| Code | Title | Hours |
|---|---|---|
| Stage I Equivalent (32 Hours) Satisfied by previous Master's degree (from either within the ATMS department or an approved MS from outside the ATMS department) | | |
| ATMS 420* | Atmospheric Chemistry | 4 |
| ATMS 500* | Dynamic Meteorology | 4 |
| ATMS 505* | Weather Systems | 4 |
| ATMS 507* | Climate Dynamics | 4 |
| ATMS 510* | Precipitation Physics | 4 |

Course List

| Code | Title | Hours |
|---|---|---|
| ATMS 511* | Atmospheric Radiation | 4 |
| ATMS 599 | Thesis Research | 16 |
| Additional approved graduate level courses** (excluding ATMS 599) | | 24 |
| Additional approved graduate level courses (including ATMS 599) | | 24 |
| **If the previous MS degree was earned outside of the Atmospheric Sciences department, these courses must include five of the following six courses: ATMS 420, ATMS 500, ATMS 505, ATMS 507, ATMS 510 and ATMS 511, if equivalent courses were not taken as part of the student's M.S. degree. Equivalency will be determined by the department after review of the course syllabi. | | |
| **Total Hours** | | **64** |

**Other Requirements**

Graduate Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap | |
| Qualifying Exam Required | No |
| Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes |
| Minimum GPA: | 3.0 |

**Atmospheric Sciences PhD**
Comparative Table of Proposed Changes

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## Appendix A

ENTERING WITH APPROVED B.S. (DIRECT TO PH.D.):

**Students entering the PhD Program in Atmospheric Sciences starting Fall 2022, are required to take 5 of the 6 courses listed below.*

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| ATMS 500 | 4 | ATMS 420 * | 4 |
| ATMS 504 | 4 | ATMS 500 * | 4 |
| ATMS 505 | 4 | ATMS 505 * | 4 |
| ATMS 507 | 4 | ATMS 507 * | 4 |
| | | ATMS 510 * | 4 |
| | | ATMS 511 * | 4 |
| Additional approved graduate level courses (excluding ATMS 599) | 32 | Additional approved graduate level courses** (excluding ATMS 599) | 28 |
| Additional approved graduate level courses (including ATMS 599) | 32 | Additional approved graduate level courses (including ATMS 599) | 32 |
| ATMS 599 | 16 | ATMS 599 | 16 |
| **Total Hours** | | | **96** |

# APPENDIX B

## ENTERING WITH AN APPROVED M.S. DEGREE:

***Students entering the PhD Program in Atmospheric Sciences starting Fall 2022, are required to take at least 5 of the 6 courses listed if not completed during their M.S. degree.**

| Stage 1 Equivalent (32 Hours) Satisfied by previous Master's degree (from either within the ATMS department or an approved MS from outside the ATMS department) | | | |
|---|---|---|---|
| **Current Requirements** | **Current Hours** | **Proposed Requirements** | **Proposed Hours** |
| ATMS 500 | 4 | ATMS 420* | 4 |
| ATMS 504 | 4 | ATMS 500* | 4 |
| ATMS 505 | 4 | ATMS 505* | 4 |
| ATMS 507 | 4 | ATMS 507* | 4 |
| | | ATMS 510* | 4 |
| | | ATMS 511* | 4 |
| Additional approved graduate level courses (excluding ATMS 599) | 24 | Additional approved graduate level courses** (excluding ATMS 599) | 24 |
| Additional approved graduate level courses (including ATMS 599) | 24 | Additional approved graduate level courses (including ATMS 599) | 24 |
| ATMS 599 | 16 | ATMS 599 | 16 |
| **Total Hours** | | | **64** |

**If the previous MS degree was earned outside of the Atmospheric Sciences department, these courses must include five of the following six courses: ATMS 420, ATMS 500, ATMS 505, ATMS 507, ATMS 510, and ATMS 511, if equivalent courses were not taken as part of the student's M.S. degree. Equivalency will be determined by the department after review of the course syllabi.

Date Submitted: 02/09/22 3:23 pm

# Viewing: 10KS0439PHD : Mathematics, PhD

Last approved: 09/03/19 2:41 pm

Last edit: 02/23/22 3:16 pm

Changes proposed by: Andrea Ray

| | |
|---|---|
| Catalog Pages Using this Program | Mathematics, PhD |

Proposal Type:

## In Workflow

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

## Approval Path

1. 02/09/22 3:40 pm Deb Forgacs (dforgacs): Approved for U Program Review
2. 02/09/22 10:50 pm Vera Hur (verahur): Approved for 1257 Head
3. 02/10/22 8:26 am Stephen Downie (sdownie): Approved for KV Dean
4. 02/10/22 8:27 am John Wilkin (jpwilkin): Approved for University Librarian
5. 02/21/22 1:12 pm Allison McKinney (agrindly):

Approved for Grad_College
6. 02/23/22 3:18 pm Kathy Martensen (kmartens): Approved for Provost

## History

1. Sep 3, 2019 by Mary Lowry (lowry)

Major (ex. Special Education)

This proposal is for a:
Revision

## Administration Details

| | |
|---|---|
| Official Program Name | Mathematics, PhD |
| Sponsor College | Liberal Arts & Sciences |
| Sponsor Department | Mathematics |
| Sponsor Name | Yuliy Baryshnikov, Director of Graduate Studies |
| Sponsor Email | ymb@illinois.edu |
| College Contact | Stephen R. Downie |
| College Contact Email | sdownie@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.*

Karen Mortensen, Associate Director of Graduate Studies, kmortens@illinois.edu

Does this program have inter-departmental administration?
No

## Proposal Title

Effective Catalog Term: Fall 2022

Provide a brief, concise description (not justification) of your proposal.

Administrative approval to revise the PhD in Mathematics

The proposal is to drop the following requirement from the PhD Mathematics program: "Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542. 0-4 credit hours."

List here any related proposals/revisions and their keys. *Example: This BS proposal (key 567) is related to the Concentration A proposal (key 145) and the Concentration B proposal (key 203).*

## Program Justification

Why are these changes necessary?

The Graduate Affairs Committee of the Department of Mathematics has decided that the complex analysis requirement is no longer necessary. Many of our PhD students enter the program with good undergraduate background in complex analysis. Those who need further background in complex analysis for their intended area of study can be guided to Math 448 or Math 542 through the advising process. Math 542 will remain one of the choices for the comprehensive requirement for PhD students (called "core courses" in the catalog). This change will streamline our PhD program by allowing students to study complex analysis to the extent that it furthers their individual study plans, rather than having it as a universal requirement.

## Instructional Resources

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

No

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

No

## 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 are:

1. Acquire a foundation in abstract algebra at the graduate level.

2. Acquire a foundation in real analysis at the graduate level.

3. Acquire a suitable breadth of knowledge to provide a foundation for undertaking high-level research.

4. Gain a broad understanding of the range of current research in the mathematical sciences.

5. Demonstrate depth of knowledge in chosen area of research specialization.

6. Gain the ability to conduct independent mathematical research at a professional level.

7. Gain experience and competence in the teaching of mathematics at the college level.

Graduate program staff, supervised by the Director of Graduate Studies, collect data regularly on conference travel support for PhD students, financial support (RA, TA, Fellowship), publication rates for our students, job placement, and time to degree. The primary sources for information are the graduate student database, students' annual progress reviews. Additional information is gained in the director's annual individual meetings with each PhD student. The Director of Graduate Studies provides an annual summary report to the Graduate Affairs Committee near the end of the spring semester each year. The findings of the report are presented at the annual Fall meeting of the department faculty. The Graduate Affairs Committee is tasked with using the assessment information to make adjustments to our program to improve student learning.

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

No

## Program of Study

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

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

Revised programs: Drop Complex Analysis form PhD Math.doc

Mathematics PhD Comparative Table.docx

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

Catalog Page Text - Overview Tab

Text for Overview tab on 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

## Requirements

Course List

| Code | Title | Hours |
|---|---|---|
| ~~Students must demonstrate competence in five core courses. Two of these are required to be MATH 500 (Abstract Algebra) and MATH 540 (Real Analysis). The remaining three can be chosen from the following list of electives: MATH 511, MATH 518, MATH 525, MATH 530, MATH 531, MATH 542, MATH 550, MATH 553, MATH 561, MATH 563, MATH 570, MATH 580. To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic.~~ | | ~~20~~ |
| ~~Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542.~~ | | ~~0-4~~ |
| Students must demonstrate competence in five core courses including the following:<br>To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic. | | |
| MATH 500 | Abstract Algebra I | 4 |
| MATH 540 | Real Analysis | 4 |
| Plus choose three of the following: | | 12 |
| MATH 511 | Intro to Algebraic Geometry | |
| MATH 518 | Differentiable Manifolds I | |
| MATH 525 | Algebraic Topology I | |
| MATH 530 | Algebraic Number Theory | |
| MATH 531 | Analytic Theory of Numbers I | |
| MATH 542 | Complex Variables I | |
| MATH 550 | Dynamical Systems I | |
| MATH 553 | Partial Differential Equations | |
| MATH 561 | Theory of Probability I | |
| MATH 563 | Risk Modeling and Analysis | |
| MATH 570 | Mathematical Logic | |
| MATH 580 | Combinatorial Mathematics | |
| Master's equivalency | | 32 |
| MATH 599 | Thesis Research (0 min applied toward degree) | 0 |
| Total Hours: | | 96 |

## Other Requirements

Grad Other Degree Requirements

| Requirement | Description |
| --- | --- |
| Other requirements may overlap<br>MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | |
| 64 hours in residence | |
| Masters Degree Required for Admission to PhD? | No |
| Comprehensive Exam Required | Yes |
| Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes |
| Minimum GPA: | 3.25 |

Corresponding Degree

## Program Features

| | |
| --- | --- |
| Academic Level | Graduate |
| Does this major have transcripted concentrations? | No |

What is the typical time to completion of this program?
5-6 years

What are the minimum Total Credit Hours required for this program?
96

| | |
| --- | --- |
| What is the required GPA? | 3.25 |
| CIP Code | 270101 - Mathematics, General. |

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 | Fall 2022 |

Admissions Term

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.

Applicants must submit transcripts, a statement of purpose, three letters of recommendation, and a resume. TOEFL/IELTS/Duolingo scores are required in accordance with Graduate College policy, and in addition the program requires a minimum of TOEFL speaking score of 22 or an IELTS speaking score of 6.5. A minimum GPA of 3.25 is required. A faculty admissions committee evaluates applications holistically, focusing on indicators of potential for success in mathematical research.

Describe how critical academic functions such as admissions and student advising are managed.

A faculty admissions committee evaluates applications. The committee is appointed by the chair and overseen by the Director of Graduate Studies. First year PhD students are advised by the Director of Graduate Studies, who helps students make appropriate course choices and who guides them towards identifying a thesis advisor, typically during the second year in the program. Advising is thereafter primarily the responsibility of the thesis advisor, but each student in the program also meets at least once per year with the Director of Graduate Studies to review their progress and plans. In addition, students must submit a progress report annually. The report is signed by the thesis advisor and reviewed by the Director of Graduate Studies.

## Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No impact on enrollment or degrees awarded.

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 budgetary implications for this revision?

No

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?

This revision will not require any financial support.

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

## 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.

Attach File(s)

## 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 impact on faculty resources will be minimal. Demand for Math 448 and Math 542 will decrease slightly, but both courses will continue to be offered on the current schedule, since there is plenty of demand from undergraduates, master's students, and PhD students who take these courses by choice.

## 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.

Current collections and services are adequate for the proposed program.

## EP Documentation

| | |
|---|---|
| EP Control Number | EP.22.110 |
| Attach Rollback/Approval Notices | |
| This proposal requires HLC inquiry | No |

## DMI Documentation

| | |
|---|---|
| Attach Final Approval Notices | |
| Banner/Codebook Name | PHD:Mathematics -UIUC |
| Program Code: | 10KS0439PHD |

| Minor Code | Conc Code | Degree Code | PHD | Major Code |
|---|---|---|---|---|
| 0439 | | | | |

| | |
|---|---|
| Senate Approval Date | |
| Senate Conference Approval Date | |
| BOT Approval | |

| | |
|---|---|
| Date | |
| IBHE Approval Date | |
| HLC Approval Date | |
| Effective Date: | |
| Attached Document Justification for this request | |
| Program Reviewer Comments | **Allison McKinney (agrindly) (02/21/22 1:12 pm):** Approved administratively by the Graduate College.<br>**Kathy Martensen (kmartens) (02/23/22 3:15 pm):** Administrative approval: No change to total hours required; doesn't restrict student choice. |

Key: 362

# Mathematics, PhD

Comparative Table of Proposed Changes

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| Students must demonstrate competence in five core courses. Two of these are required to be MATH 500 (Abstract Algebra) and MATH 540 (Real Analysis). The remaining three can be chosen from the following list of electives: MATH 511, MATH 518, MATH 525, MATH 530, MATH 531, MATH 542, MATH 550, MATH 553, MATH 561, MATH 563, MATH 570, MATH 580. To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic. | 20 | Students must demonstrate competence in five core courses. Two of these are required to be MATH 500 (Abstract Algebra) and MATH 540 (Real Analysis). The remaining three can be chosen from the following list of electives: MATH 511, MATH 518, MATH 525, MATH 530, MATH 531, MATH 542, MATH 550, MATH 553, MATH 561, MATH 563, MATH 570, MATH 580. To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic. | 20 |
| Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542. | 0-4 | | |
| Master's equivalency | 32 | Master's equivalency | 32 |
| MATH 599 Thesis Research (0 min applied toward degree) | 0 | MATH 599 Thesis Research (0 min applied toward degree) | 0 |
| **Total Hours:** | 96 | **Total Hours:** | 96 |
| | | | |
| MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | | MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | |
| 64 hours in residence | | 64 hours in residence | |
| Masters Degree Required for Admission to PhD? | No | Masters Degree Required for Admission to PhD? | No |
| Comprehensive Exam Required | Yes | Comprehensive Exam Required | Yes |
| Preliminary Exam Required | Yes | Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes | Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes | Dissertation Deposit Required | Yes |
| Minimum GPA: | 3.25 | Minimum GPA: | 3.25 |

ILLINOIS

# Proposal for revised curricula (degree, major, concentration, minor)

**Submit completed proposals via email to Associate Dean Stephen R. Downie (sdownie@illinois.edu). Please obtain Executive Officer and School Director (if applicable) approval via email and forward with the proposal to LAS.**

**Proposal Title:** Remove Undergraduate Complex Analysis Proficiency Requirement from Math PhD Program

**Sponsor(s):** Yuliy Baryshnikov, Director of Graduate Studies, ymb@illinois.edu

**College contact**: Stephen R. Downie, Interim Associate Dean for Curricula and Academic Policy, College of Liberal Arts and Sciences, sdownie@illinois.edu

**In addition to the unit sponsor(s), who in the unit should be contacted if the College or campus has questions on the proposal?** Karen Mortensen, Associate Director of Graduate Studies, kmortens@illinois.edu

**Does this program have inter-departmental administration?** No

## PROGRAM DESCRIPTION and JUSTIFICATION

**Proposed effective catalog term:** Fall 2022

1) **Provide a brief, concise description of your proposal.** The proposal is to drop the following requirement from the PhD Mathematics program: *"Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542. 0-4 credit hours."* See table at the end of the document.

2) **Why are these changes necessary?** The Graduate Affairs Committee of the Department of Mathematics has decided that the complex analysis requirement is no longer necessary. Many of our PhD students enter the program with good undergraduate background in complex analysis. Those who need further background in complex analysis for their intended area of study can be guided to Math 448 or Math 542 through the advising process. Math 542 will remain one of the choices for the comprehensive requirement for PhD students (called "core courses" in the catalog). This change will streamline our PhD program by allowing students to study complex analysis to the extent that it furthers their individual study plans, rather than having it as a universal requirement.

3) **In addition, please provide an answer as to how your undergraduate degree (120 hours of coursework) will satisfy this requirement: IBHE requires that all degree programs contain at least 40**

**credit hours in upper division courses. Upper division courses have been described as 300- and 400-level coursework and some 200-level courses in which multiple prerequisites are required.** N/A

## INSTRUCTIONAL RESOURCES

**1) 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.

**2) Does the program include any required or recommended subjects that are offered by other departments? If yes, please list the courses. Explain how these additional courses will be used by the program and provide letters of support from the departments.** No.

## PROGRAM REGULATION & ASSESSMENT

1) **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**.
The learning objectives are:
1. Acquire a foundation in abstract algebra at the graduate level.

2. Acquire a foundation in real analysis at the graduate level.

3. Acquire a suitable breadth of knowledge to provide a foundation for undertaking high-level research.

4. Gain a broad understanding of the range of current research in the mathematical sciences.

5. Demonstrate depth of knowledge in chosen area of research specialization.

6. Gain the ability to conduct independent mathematical research at a professional level.

7. Gain experience and competence in the teaching of mathematics at the college level.

Graduate program staff, supervised by the Director of Graduate Studies, collect data regularly on conference travel support for PhD students, financial support (RA, TA, Fellowship), publication rates for our students, job placement, and time to degree. The primary sources for information are the graduate student database, students' annual progress reviews. Additional information is gained in the director's annual individual meetings with each PhD student. The Director of Graduate Studies provides an annual summary report to the Graduate Affairs Committee near the end of the spring semester each year. The findings of the report are presented at the annual Fall meeting of the department faculty. The Graduate Affairs Committee is tasked with using the assessment information to make adjustments to our program to improve student learning.

**2) Is the career/profession for graduates of this program regulated by the State of Illinois?** No.

## PROGRAM FEATURES

**1) Will specialized accreditation be sought for this program?** No.

**2) If a proposal for a concentration-**

**will you admit to the concentration directly?** Yes / No

**is a concentration required for graduation?** Yes / No

**3) If a proposal for a Minor-**

**Is this minor:**

- A comprehensive study in a single discipline
- An interdisciplinary study focusing on a single theme
- Exception

**Other than certification via the students' degree audits, is there any additional planned mechanism to award/honor successful completion of the minor?**

**4) What is the typical time to completion of this program? (majors and grad programs only)**

*5-6 years*

**5) What are the minimum Total Credit Hours required for this program? (majors and grad programs only)** 96

**6) For Grad Programs only: What is the required GPA?** 3.25

## DELIVERY METHOD

**What is the program's primary delivery method, choose from following?**

- On campus

## ADMISSION REQUIREMENTS (grad programs and undergraduate majors)

**1) Desired admissions term:** Fall 2022

**Is this revision a change to the admission status of the program?** *No.*

**2) 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. (degrees, majors, concentrations**

**ONLY)** Applicants must submit transcripts, a statement of purpose, three letters of recommendation, and a resume. TOEFL/IELTS/Duolingo scores are required in accordance with Graduate College policy, and in addition the program requires a minimum of TOEFL speaking score of 22 or an IELTS speaking score of 6.5. A minimum GPA of 3.25 is required. A faculty admissions committee evaluates applications holistically, focusing on indicators of potential for success in mathematical research.

**3) Describe how critical academic functions such as admissions and student advising are managed.** A faculty admissions committee evaluates applications. The committee is appointed by the chair and overseen by the Director of Graduate Studies. First year PhD students are advised by the Director of Graduate Studies, who helps students make appropriate course choices and who guides them towards identifying a thesis advisor, typically during the second year in the program. Advising is thereafter primarily the responsibility of the thesis advisor, but each student in the program also meets at least once per year with the Director of Graduate Studies to review their progress and plans. In addition, students must submit a progress report annually. The report is signed by the thesis advisor and reviewed by the Director of Graduate Studies.

## ENROLLMENT (grad programs and undergraduate majors)

**1) Describe how this revision will impact enrollment and degrees awarded.** No impact on enrollment or degrees awarded.

**2)** Estimated Annual Number of Degrees Awarded

**Year 1:** 20

**Year 5 (or when fully implemented):** 20

**3) What is the matriculation term for this program?** Fall

## ENROLLMENT (minors only)

Will the department limit enrollment to the minor Y/N? if yes, please explain

Describe how the department will monitor the admission to/enrollment in the minor.

Are there any prerequisites for the minor?

Describe how this revision will impact enrollment and degrees awarded.

## BUDGET

**1) Please describe any budgetary implications for this revision- addressing applicable personnel, facilities, technology and supply costs.** No budgetary implications.

**2) Will the revision require staffing (faculty, advisors, etc.) beyond what is currently available?** No.

**3) Please provide any additional budget information needed to effectively evaluate the proposal.**

## FINANCIAL RESOURCES

**1) How does the unit intend to financially support this proposal?** This revision will not require any financial support.

**2) Will the unit need to seek campus or other external resources? If yes, please provide a summary of the sources and an indication of the approved support.** No.

**3) 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)** Graduate Base Rate.

**4) Are you seeking a change in the tuition rate or differential for this program Y/N? If yes, please explain.** No

## RESOURCE IMPLICATIONS

**1) Facilities- Will the program require new or additional facilities or significant improvements to already existing facilities?** No.

**2) Technology- Will the program need additional technology beyond what is currently available for the unit?** No.

**3) 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 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.***

**1) 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 impact on faculty resources will be minimal. Demand for Math 448 and Math 542 will decrease slightly, but both courses will continue to be offered on the current schedule, since there is plenty of demand from undergraduates, master's students, and PhD students who take these courses by choice.

**2) 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.** Current collections and services are adequate for the proposed program.

## ACADEMIC CATALOG ENTRY

**1) All academic catalog entries contain 2 tabs: *Overview* and *Degree Requirements*. All proposal revisions will include updates to the *Degree Requirements* tab- which notes the major requirements (courses, hours) for the proposed curricula. Please see the University of Illinois Academic Catalog-**

**http://catalog.illinois.edu/ for your unit for an example of the entry. Below, provide the updated degree requirements, using the current entry as a model.**

**1.A) DEGREE REQUIREMENTS-**

| | |
|---|---|
| Students must demonstrate competence in five core courses. Two of these are required to be MATH 500 (Abstract Algebra) and MATH 540 (Real Analysis). The remaining three can be chosen from the following list of electives: MATH 511, MATH 518, MATH 525, MATH 530, MATH 531, MATH 542, MATH 550, MATH 553, MATH 561, MATH 563, MATH 570, MATH 580. To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic. | 20 |
| Master's equivalency | 32 |
| MATH 599 Thesis Research (0 min applied toward degree) | 0 |
| **Total Hours:** | 96 |

| **Other Requirements** | |
|---|---|
| Other requirements may overlap | |
| MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | |
| 64 hours in residence | |
| Masters Degree Required for Admission to PhD? | No |
| Comprehensive Exam Required | Yes |
| Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes |
| Minimum GPA: | 3.25 |

**1.B) If updates are needed for the Overview tab, please include those here-**

None

**2) Include a comparative table of the current and proposed requirements.**

Comparative Table of Proposed Changes

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| Students must demonstrate competence in five core courses. Two of these are required to be MATH 500 (Abstract Algebra) and MATH 540 (Real Analysis). The remaining three can be chosen from the following list of electives: MATH 511, MATH 518, MATH 525, MATH 530, MATH 531, MATH 542, MATH 550, MATH 553, MATH 561, MATH 563, MATH 570, MATH 580. To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic. | 20 | Students must demonstrate competence in five core courses. Two of these are required to be MATH 500 (Abstract Algebra) and MATH 540 (Real Analysis). The remaining three can be chosen from the following list of electives: MATH 511, MATH 518, MATH 525, MATH 530, MATH 531, MATH 542, MATH 550, MATH 553, MATH 561, MATH 563, MATH 570, MATH 580. To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic. | 20 |
| Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542. | 0-4 | | |
| Master's equivalency | 32 | Master's equivalency | 32 |
| MATH 599 Thesis Research (0 min applied toward degree) | 0 | MATH 599 Thesis Research (0 min applied toward degree) | 0 |
| **Total Hours:** | 96 | **Total Hours:** | 96 |
| | | | |
| MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | | MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | |
| 64 hours in residence | | 64 hours in residence | |
| Masters Degree Required for Admission to PhD? | No | Masters Degree Required for Admission to PhD? | No |
| Comprehensive Exam Required | Yes | Comprehensive Exam Required | Yes |
| Preliminary Exam Required | Yes | Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes | Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes | Dissertation Deposit Required | Yes |
| Minimum GPA: | 3.25 | Minimum GPA: | 3.25 |

Date Submitted: 02/09/22 3:24 pm

Viewing: **5626 : Mathematics: Actuarial Science & Risk Analytics, PhD**

Last approved: 08/30/19 3:50 pm

Last edit: 02/23/22 3:20 pm

Changes proposed by: Andrea Ray

| | |
|---|---|
| Catalog Pages Using this Program | Mathematics: Actuarial Science & Risk Analytics, PhD |

Proposal Type:

## In Workflow

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

## Approval Path

1. 02/09/22 3:40 pm Deb Forgacs (dforgacs): Approved for U Program Review
2. 02/09/22 10:51 pm Vera Hur (verahur): Approved for 1257 Head
3. 02/10/22 8:21 am Stephen Downie (sdownie): Approved for KV Dean
4. 02/10/22 8:25 am John Wilkin (jpwilkin): Approved for University Librarian
5. 02/21/22 1:13 pm Allison McKinney (agrindly):

Approved for Grad_College
6. 02/23/22 3:20 pm Kathy Martensen (kmartens): Approved for Provost

## History

1. Aug 28, 2019 by Mary Lowry (lowry)
2. Aug 30, 2019 by Mary Lowry (lowry)

Concentration (ex. Dietetics)

This proposal is for a:
Revision

## Administration Details

| | |
|---|---|
| Official Program Name | Mathematics: Actuarial Science & Risk Analytics, PhD |
| Sponsor College | Liberal Arts & Sciences |
| Sponsor Department | Mathematics |
| Sponsor Name | Yuliy Baryshnikov, Director of Graduate Studies and Runhuan Feng, Director of Actuarial Science |
| Sponsor Email | ymb@illinois.edu; rfeng@illinois.edu |
| College Contact | Stephen R. Downie |
| College Contact Email | sdownie@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.*

Karen Mortensen, Associate Director of Graduate Studies, kmortens@illinois.edu

Does this program have inter-departmental administration?

No

## Proposal Title

Effective Catalog Term: Fall 2022

Provide a brief, concise description (not justification) of your proposal.

Administrative approval to revise the concentration in Actuarial Science & Risk Analytics within the PhD in Mathematics

The proposal is (1) to drop the following requirement from Mathematics: Actuarial Science & Risk Analytics, PhD: "Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542. 0-4 credit hours" and (2) to require STAT 511 instead of STAT 510.

List here any related proposals/revisions and their keys. *Example: This BS proposal (key 567) is related to the Concentration A proposal (key 145) and the Concentration B proposal (key 203).*

## Program Justification

Why are these changes necessary?

The Graduate Affairs Committee of the Department of Mathematics has decided that the complex analysis requirement is no longer necessary. Many of our PhD students enter the program with good undergraduate background in complex analysis. Those who need further background in complex analysis for their intended area of study can be guided to Math 448 or Math 542 through the advising process. Math 542 will remain one of the choices for the comprehensive requirement for PhD students (called "core courses" in the catalog). This change will streamline our PhD program by allowing students to study complex analysis to the extent that it furthers their individual study plans, rather than having it as a universal requirement. The change of requirement from STAT 510 to STAT 511 is necessary because Statistics has adjusted the content of STAT 510 and STAT 511. Previously, the two courses were a sequence, but STAT 510 is now aimed at MS students, whereas STAT 511 is more rigorous and is designed as a first Mathematical Statistics course for PhD students in Statistics. To prepare PhD students in our program for doctoral level research in Actuarial Science and Risk Analytics, STAT 511 is the more suitable of the two courses.

## Instructional Resources

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

No

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

No

## 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 are:

1. Acquire a foundation in real analysis at the graduate level.

2. Acquire a suitable breadth of knowledge to provide a foundation for undertaking high-level research in the field of actuarial science and risk analytics.

3. Gain a broad understanding of the range of current research in the mathematical sciences.

4. Demonstrate depth of knowledge in chosen area of research specialization.

5. Gain the ability to conduct independent mathematical research at a professional level.

6. Gain experience and competence in the teaching of mathematics at the college level.

Graduate program staff, supervised by the Director of Graduate Studies, collect data regularly on conference travel support for PhD students, financial support (RA, TA, Fellowship), publication rates for our students, job placement, and time to degree. The primary sources for information are the graduate student database, students' annual progress reviews. Additional information is gained in the director's annual individual meetings with each PhD student. The Director of Graduate Studies provides an annual summary report to the Graduate Affairs Committee near the end of the spring semester each year. The findings of the report are presented at the annual Fall meeting of the department faculty. The Graduate Affairs Committee is tasked with using the assessment information to make adjustments to our program to improve student learning.

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

No

## Program of Study

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

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

Revised programs: Drop Complex Analysis form PhD Math ASRA.doc; Mathematics Actuarial Science & Risk Analytics, PhD Comparative Table.docx

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

Catalog Page Text - Overview Tab

Text for Overview tab on 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

## Requirements

Course List

| Code | Title | Hours |
|---|---|---|
| Students must demonstrate competence in five core courses including the following: To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic. | | |
| MATH 540 | Real Analysis | 4 |
| MATH 561 | Theory of Probability I | 4 |
| MATH 563 | Risk Modeling and Analysis | 4 |
| ~~STAT 510~~ | ~~Mathematical Statistics~~ | ~~4~~ |
| STAT 511 | Advanced Mathematical Statistics | 4 |
| Plus one of the following: | | 4 |
| MATH 511 | Intro to Algebraic Geometry | |
| MATH 518 | Differentiable Manifolds I | |
| MATH 525 | Algebraic Topology I | |
| MATH 530 | Algebraic Number Theory | |
| MATH 531 | Analytic Theory of Numbers I | |
| MATH 542 | Complex Variables I | |
| MATH 550 | Dynamical Systems I | |
| MATH 553 | Partial Differential Equations | |
| MATH 570 | Mathematical Logic | |
| MATH 580 | Combinatorial Mathematics | |
| ~~Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542.~~ | | |
| Students must demonstrate competence in the following: | | |
| MATH 564 | Applied Stochastic Processes | 4 |

| Code | Title | Hours |
|---|---|---|
| STAT 425 | Statistical Modeling I | 3 or 4 |
| FIN 591 | Theory of Finance | 4 |
| Students must demonstrate competence in two of the following: | | 8 |
| ASRM 575 | Life Insurance and Pension Mathematics | 4 |
| ASRM 510 | Financial Mathematics | 4 |
| ASRM 561 | Loss Data Analytics & Credibility | 4 |
| Master's equivalency | | 32 |
| MATH 599 | Thesis Research (0 min applied toward degree) | 0 |
| Total Hours required for the degree | | 96 |

## Other requirements

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Other requirements may overlap. | |
| MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | |
| 64 hours in residence | |
| Masters Degree Required for Admission to PhD | No |
| Comprehensive Exam Required | Yes |
| Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes |
| Minimum GPA | 3.25 |

~~1~~

~~To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic.~~

# Program Relationships

Corresponding Program(s):

| Corresponding Program(s) |
|---|
| Mathematics, 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.)

## Delivery Method

This program is available:
On Campus - Students are required to be on campus, they may take some online courses.

## Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No impact on enrollment or degrees awarded.

## Budget

Are there budgetary implications for this revision? No

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?
No

Additional Budget Information

Attach File(s)

## Financial Resources

How does the unit intend to financially support this proposal?
This revision will not require any financial support.

Will the unit need to seek campus or other external resources?
No

Attach letters of support

Is this program requesting self-supporting status?
No

## Resource Implications

## Facilities

Will the program require new or additional facilities or significant

improvements to already existing facilities?

No

## Technology

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

No

## Non-Technical Resources

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

No

## Resources

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

Attach File(s)

## 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 impact on faculty resources will be minimal. Demand for Math 448 and Math 542 will decrease slightly, but both courses will continue to be offered on the current schedule, since there is plenty of demand from undergraduates, master’s students, and PhD students who take these courses by choice. Demand for STAT courses will shift slightly from STAT 510 to STAT 511, a negligible change because only about 3 students per year are expected to be enrolled in this program.

## 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.

Current collections and services are adequate for the proposed program.

## EP Documentation

| | |
|---|---|
| EP Control Number | EP.22.110 |
| Attach Rollback/Approval Notices | |
| This proposal requires HLC | No |

inquiry

# DMI Documentation

| | |
|---|---|
| Attach Final Approval Notices | |
| Banner/Codebook Name | Actuarial Sci & Risk Analytics |
| Program Code: | 5626 |

| Minor Code | Conc Code | 5626 | Degree Code | Major Code |
|---|---|---|---|---|
| | | | | |

| | |
|---|---|
| Senate Approval Date | |
| Senate Conference Approval Date | |
| BOT Approval Date | |
| IBHE Approval Date | |
| HLC Approval Date | |
| Effective Date: | |
| Attached Document Justification for this request | |
| Program Reviewer Comments | **Allison McKinney (agrindly) (02/21/22 1:12 pm):** Approved administratively by the Graduate College.<br>**Kathy Martensen (kmartens) (02/23/22 3:19 pm):** Administrative approval: Doesn't change total hours; doesn't restrict student choice. |

Key: 845

# Mathematics: Actuarial Science & Risk Analytics, PhD

Comparative Table of Proposed Changes

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| **Students must demonstrate competence in five core courses including the following:**[1] | | **Students must demonstrate competence in five core courses including the following:**[1] | |
| MATH 540 Real Analysis | 4 | MATH 540 Real Analysis | 4 |
| MATH 561 Theory of Probability I | 4 | MATH 561 Theory of Probability I | 4 |
| MATH 563 Risk Modeling and Analysis | 4 | MATH 563 Risk Modeling and Analysis | 4 |
| STAT 510 Mathematical Statistics | 4 | STAT 511 Advanced Mathematical Statistics | 4 |
| Select one of: | 4 | Select one of: | 4 |
| MATH 511 Intro to Algebraic Geometry | | MATH 511 Intro to Algebraic Geometry | |
| MATH 518 Differentiable Manifolds I | | MATH 518 Differentiable Manifolds I | |
| MATH 525 Algebraic Topology I | | MATH 525 Algebraic Topology I | |
| MATH 530 Algebraic Number Theory | | MATH 530 Algebraic Number Theory | |
| MATH 531 Analytic Theory of Numbers I | | MATH 531 Analytic Theory of Numbers I | |
| MATH 542 Complex Variables I | | MATH 542 Complex Variables I | |
| MATH 550 Dynamical Systems I | | MATH 550 Dynamical Systems I | |
| MATH 553 Partial Differential Equations | | MATH 553 Partial Differential Equations | |
| MATH 570 Mathematical Logic | | MATH 570 Mathematical Logic | |
| MATH 580 Combinatorial Mathematics | | MATH 580 Combinatorial Mathematics | |
| **Students must demonstrate competence in the following:** | | **Students must demonstrate competence in the following:** | |
| MATH 564 Applied Stochastic Processes | 4 | MATH 564 Applied Stochastic Processes | 4 |
| STAT 425 Statistical Modeling I | 3 or 4 | STAT 425 Statistical Modeling I | 3 or 4 |

| | | | | | |
|---|---|---|---|---|---|
| FIN 591 | Theory of Finance | 4 | FIN 591 | Theory of Finance | 4 |
| **Students must demonstrate competence in two of the following:** | | 8 | **Students must demonstrate competence in two of the following:** | | 8 |
| ASRM 575 | Life Insurance and Pension Mathematics | 4 | ASRM 575 | Life Insurance and Pension Mathematics | 4 |
| ASRM 510 | Financial Mathematics | 4 | ASRM 510 | Financial Mathematics | 4 |
| ASRM 561 | Loss Data Analytics & Credibility | 4 | ASRM 561 | Loss Data Analytics & Credibility | 4 |
| Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542. | | 0-4 | | | |
| Master's equivalency | | 32 | Master's equivalency | | 32 |
| MATH 599 | Thesis Research (0 min applied toward degree) | 0 | MATH 599 | Thesis Research (0 min applied toward degree) | 0 |
| **Total Hours:** | | 96 | **Total Hours:** | | 96 |
| Other Requirements may overlap | | | Other Requirements may overlap | | |
| MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | | | MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | | |
| 64 hours in residence | | | 64 hours in residence | | |
| Masters Degree Required for Admission to PhD? | | No | Masters Degree Required for Admission to PhD? | | No |
| Comprehensive Exam Required | | Yes | Comprehensive Exam Required | | Yes |
| Preliminary Exam Required | | Yes | Preliminary Exam Required | | Yes |
| Final Exam/Dissertation Defense Required | | Yes | Final Exam/Dissertation Defense Required | | Yes |
| Dissertation Deposit Required | | Yes | Dissertation Deposit Required | | Yes |
| Minimum GPA: | | 3.25 | Minimum GPA: | | 3.25 |

[1] To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic.

ILLINOIS

## Proposal for revised curricula (degree, major, concentration, minor)

**Submit completed proposals via email to Associate Dean Stephen R. Downie (sdownie@illinois.edu). Please obtain Executive Officer and School Director (if applicable) approval via email and forward with the proposal to LAS.**

**Proposal Title:** Remove Undergraduate Complex Analysis Proficiency Requirement from Math PhD Program, Actuarial Science and Risk Analysis track

**Sponsor(s):** Yuliy Baryshnikov, Director of Graduate Studies, ymb@illinois.edu and Runhuan Feng, Director of Actuarial Science, rfeng@illinois.edu

**College contact**: Stephen R. Downie, Interim Associate Dean for Curricula and Academic Policy, College of Liberal Arts and Sciences, sdownie@illinois.edu

**In addition to the unit sponsor(s), who in the unit should be contacted if the College or campus has questions on the proposal?** Karen Mortensen, Associate Director of Graduate Studies, kmortens@illinois.edu

**Does this program have inter-departmental administration?** No

## PROGRAM DESCRIPTION and JUSTIFICATION

**Proposed effective catalog term:** Fall 2022

1) **Provide a brief, concise description of your proposal.** The proposal is (1) to drop the following requirement from Mathematics: Actuarial Science & Risk Analytics, PhD: *"Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542. 0-4 credit hours*" and (2) to require STAT 511 instead of STAT 510. See table at the end of the document.

2) **Why are these changes necessary?** The Graduate Affairs Committee of the Department of Mathematics has decided that the complex analysis requirement is no longer necessary. Many of our PhD students enter the program with good undergraduate background in complex analysis. Those who need further background in complex analysis for their intended area of study can be guided to Math 448 or Math 542 through the advising process. Math 542 will remain one of the choices for the comprehensive requirement for PhD students (called "core courses" in the catalog). This change will streamline our PhD program by allowing students to study complex analysis to the extent that it furthers their individual study plans, rather than having it as a universal requirement. The change of requirement from STAT 510 to STAT 511 is necessary because Statistics has adjusted the content of

STAT 510 and STAT 511. Previously, the two courses were a sequence, but STAT 510 is now aimed at MS students, whereas STAT 511 is more rigorous and is designed as a first Mathematical Statistics course for PhD students in Statistics. To prepare PhD students in our program for doctoral level research in Actuarial Science and Risk Analytics, STAT 511 is the more suitable of the two courses.

3) **In addition, please provide an answer as to how your undergraduate degree (120 hours of coursework) will satisfy this requirement: IBHE requires that all degree programs contain at least 40 credit hours in upper division courses. Upper division courses have been described as 300- and 400-level coursework and some 200-level courses in which multiple prerequisites are required.** N/A

## INSTRUCTIONAL RESOURCES

**1) 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.

**2) Does the program include any required or recommended subjects that are offered by other departments? If yes, please list the courses. Explain how these additional courses will be used by the program and provide letters of support from the departments.** No.

## PROGRAM REGULATION & ASSESSMENT

1) **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**.
The learning objectives are:

1. Acquire a foundation in real analysis at the graduate level.

2. Acquire a suitable breadth of knowledge to provide a foundation for undertaking high-level research in the field of actuarial science and risk analytics.

3. Gain a broad understanding of the range of current research in the mathematical sciences.

4. Demonstrate depth of knowledge in chosen area of research specialization.

5. Gain the ability to conduct independent mathematical research at a professional level.

6. Gain experience and competence in the teaching of mathematics at the college level.

Graduate program staff, supervised by the Director of Graduate Studies, collect data regularly on conference travel support for PhD students, financial support (RA, TA, Fellowship), publication rates for our students, job placement, and time to degree. The primary sources for information are the graduate student database, students' annual progress reviews. Additional information is gained in the director's annual individual meetings with each PhD student. The Director of Graduate Studies provides an annual

summary report to the Graduate Affairs Committee near the end of the spring semester each year. The findings of the report are presented at the annual Fall meeting of the department faculty. The Graduate Affairs Committee is tasked with using the assessment information to make adjustments to our program to improve student learning.

**2) Is the career/profession for graduates of this program regulated by the State of Illinois?** No.

## PROGRAM FEATURES

**1) Will specialized accreditation be sought for this program?** No.

**2) If a proposal for a concentration-**

**will you admit to the concentration directly?** Yes / No

**is a concentration required for graduation?** Yes / No

**3) If a proposal for a Minor-**

**Is this minor:**

- A comprehensive study in a single discipline
- An interdisciplinary study focusing on a single theme
- Exception

**Other than certification via the students' degree audits, is there any additional planned mechanism to award/honor successful completion of the minor?**

**4) What is the typical time to completion of this program? (majors and grad programs only)**

*5-6 years*

**5) What are the minimum Total Credit Hours required for this program? (majors and grad programs only)** 96

**6) For Grad Programs only: What is the required GPA?** 3.25

## DELIVERY METHOD

**What is the program's primary delivery method, choose from following?**

- On campus

## ADMISSION REQUIREMENTS (grad programs and undergraduate majors)

**1) Desired admissions term:** Fall 2022

**Is this revision a change to the admission status of the program?** *No.*

**2) 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. (degrees, majors, concentrations ONLY)** Applicants must submit transcripts, a statement of purpose, three letters of recommendation, and a resume. TOEFL/IELTS/Duolingo scores are required in accordance with Graduate College policy, and in addition the program requires a minimum of TOEFL speaking score of 22 or an IELTS speaking score of 6.5. A minimum GPA of 3.25 is required. A faculty admissions committee evaluates applications holistically, focusing on indicators of potential for success in mathematical research.

**3) Describe how critical academic functions such as admissions and student advising are managed.** A faculty admissions committee evaluates applications. The committee is appointed by the chair and overseen by the Director of Graduate Studies. First year PhD students are advised by the Director of Graduate Studies along with the Director of Actuarial Science, who help students make appropriate course choices and who guide them towards identifying a thesis advisor, typically during the second year in the program. Advising is thereafter primarily the responsibility of the thesis advisor, but each student in the program also meets at least once per year with the Director of Graduate Studies to review their progress and plans. In addition, students must submit a progress report annually. The report is signed by the thesis advisor and reviewed by the Director of Graduate Studies.

## ENROLLMENT (grad programs and undergraduate majors)

**1) Describe how this revision will impact enrollment and degrees awarded.** No impact on enrollment or degrees awarded.

**2)** Estimated Annual Number of Degrees Awarded

**Year 1:** 3

**Year 5 (or when fully implemented):** 3

**3) What is the matriculation term for this program?** Fall

## ENROLLMENT (minors only)

Will the department limit enrollment to the minor Y/N? if yes, please explain

Describe how the department will monitor the admission to/enrollment in the minor.

Are there any prerequisites for the minor?

Describe how this revision will impact enrollment and degrees awarded.

## BUDGET

**1) Please describe any budgetary implications for this revision- addressing applicable personnel, facilities, technology and supply costs.** No budgetary implications.

**2) Will the revision require staffing (faculty, advisors, etc.) beyond what is currently available?** No.

**3) Please provide any additional budget information needed to effectively evaluate the proposal.**

## FINANCIAL RESOURCES

**1) How does the unit intend to financially support this proposal?** This revision will not require any financial support.

**2) Will the unit need to seek campus or other external resources? If yes, please provide a summary of the sources and an indication of the approved support.** No.

**3) 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)** Graduate Base Rate.

**4) Are you seeking a change in the tuition rate or differential for this program Y/N? If yes, please explain.** No

## RESOURCE IMPLICATIONS

**1) Facilities- Will the program require new or additional facilities or significant improvements to already existing facilities?** No.

**2) Technology- Will the program need additional technology beyond what is currently available for the unit?** No.

**3) 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 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.***

**1) 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 impact on faculty resources will be minimal. Demand for Math 448 and Math 542 will decrease slightly, but both courses will continue to be offered on the current schedule, since there is plenty of demand from undergraduates, master's students, and PhD students who take these courses by choice. Demand for STAT courses will shift slightly from STAT 510 to STAT 511, a negligible change because only about 3 students per year are expected to be enrolled in this program.

**2) 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.** Current collections and services are adequate for the proposed program.

## ACADEMIC CATALOG ENTRY

**1) All academic catalog entries contain 2 tabs: *Overview* and *Degree Requirements*. All proposal revisions will include updates to the *Degree Requirements* tab- which notes the major requirements (courses, hours) for the proposed curricula. Please see the University of Illinois Academic Catalog- http://catalog.illinois.edu/ for your unit for an example of the entry. Below, provide the updated degree requirements, using the current entry as a model.**

**1.A) DEGREE REQUIREMENTS-**

| | | |
|---|---|---|
| **Students must demonstrate competence in five core courses including the following:[1]** | | |
| MATH 540 | Real Analysis | 4 |
| MATH 561 | Theory of Probability I | 4 |
| MATH 563 | Risk Modeling and Analysis | 4 |
| STAT 511 | Advanced Mathematical Statistics | 4 |
| Select one of: | | 4 |
| MATH 511 | Intro to Algebraic Geometry | |
| MATH 518 | Differentiable Manifolds I | |
| MATH 525 | Algebraic Topology I | |
| MATH 530 | Algebraic Number Theory | |
| MATH 531 | Analytic Theory of Numbers I | |
| MATH 542 | Complex Variables I | |
| MATH 550 | Dynamical Systems I | |
| MATH 553 | Partial Differential Equations | |
| MATH 570 | Mathematical Logic | |
| MATH 580 | Combinatorial Mathematics | |
| **Students must demonstrate competence in the following:** | | |
| MATH 564 | Applied Stochastic Processes | 4 |
| STAT 425 | Statistical Modeling I | 3 or 4 |
| FIN 591 | Theory of Finance | 4 |
| **Students must demonstrate competence in two of the following:** | | 8 |
| ASRM 575 | Life Insurance and Pension Mathematics | 4 |
| ASRM 510 | Financial Mathematics | 4 |
| ASRM 561 | Loss Data Analytics & Credibility | 4 |
| **Master's equivalency** | | 32 |
| MATH 599 | Thesis Research (0 min applied toward degree) | 0 |
| **Total Hours:** | | 96 |

| | |
|---|---|
| **Other Requirements** | |

| | |
|---|---|
| Other requirements may overlap | |
| MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | |
| 64 hours in residence | |
| Masters Degree Required for Admission to PhD? | No |
| Comprehensive Exam Required | Yes |
| Preliminary Exam Required | Yes |
| Final Exam/Dissertation Defense Required | Yes |
| Dissertation Deposit Required | Yes |
| Minimum GPA: | 3.25 |

[1] To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic.

**1.B) If updates are needed for the Overview tab, please include those here-**

None

**2) Include a comparative table of the current and proposed requirements.**

Comparative Table of Proposed Changes

| Current Requirements | Current Hours | Proposed Requirements | Proposed Hours |
|---|---|---|---|
| **Students must demonstrate competence in five core courses including the following:**[1] | | **Students must demonstrate competence in five core courses including the following:**[1] | |
| MATH 540 Real Analysis | 4 | MATH 540 Real Analysis | 4 |
| MATH 561 Theory of Probability I | 4 | MATH 561 Theory of Probability I | 4 |
| MATH 563 Risk Modeling and Analysis | 4 | MATH 563 Risk Modeling and Analysis | 4 |
| STAT 510 Mathematical Statistics | 4 | STAT 511 Advanced Mathematical Statistics | 4 |
| Select one of: | 4 | Select one of: | 4 |
| MATH 511 Intro to Algebraic Geometry | | MATH 511 Intro to Algebraic Geometry | |
| MATH 518 Differentiable Manifolds I | | MATH 518 Differentiable Manifolds I | |
| MATH 525 Algebraic Topology I | | MATH 525 Algebraic Topology I | |
| MATH 530 Algebraic Number Theory | | MATH 530 Algebraic Number Theory | |
| MATH 531 Analytic Theory of Numbers I | | MATH 531 Analytic Theory of Numbers I | |
| MATH 542 Complex Variables I | | MATH 542 Complex Variables I | |
| MATH 550 Dynamical Systems I | | MATH 550 Dynamical Systems I | |
| MATH 553 Partial Differential Equations | | MATH 553 Partial Differential Equations | |
| MATH 570 Mathematical Logic | | MATH 570 Mathematical Logic | |
| MATH 580 Combinatorial Mathematics | | MATH 580 Combinatorial Mathematics | |
| **Students must demonstrate competence in the following:** | | **Students must demonstrate competence in the following:** | |
| MATH 564 Applied Stochastic Processes | 4 | MATH 564 Applied Stochastic Processes | 4 |
| STAT 425 Statistical Modeling I | 3 or 4 | STAT 425 Statistical Modeling I | 3 or 4 |
| FIN 591 Theory of Finance | 4 | FIN 591 Theory of Finance | 4 |

| | | | | | |
|---|---|---|---|---|---|
| **Students must demonstrate competence in two of the following:** | | 8 | **Students must demonstrate competence in two of the following:** | | 8 |
| ASRM 575 | Life Insurance and Pension Mathematics | 4 | ASRM 575 | Life Insurance and Pension Mathematics | 4 |
| ASRM 510 | Financial Mathematics | 4 | ASRM 510 | Financial Mathematics | 4 |
| ASRM 561 | Loss Data Analytics & Credibility | 4 | ASRM 561 | Loss Data Analytics & Credibility | 4 |
| Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542. | | 0-4 | | | |
| Master's equivalency | | 32 | Master's equivalency | | 32 |
| MATH 599 | Thesis Research (0 min applied toward degree) | 0 | MATH 599 | Thesis Research (0 min applied toward degree) | 0 |
| **Total Hours:** | | 96 | **Total Hours:** | | 96 |
| Other Requirements may overlap | | | Other Requirements may overlap | | |
| MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | | | MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree. | | |
| 64 hours in residence | | | 64 hours in residence | | |
| Masters Degree Required for Admission to PhD? | | No | Masters Degree Required for Admission to PhD? | | No |
| Comprehensive Exam Required | | Yes | Comprehensive Exam Required | | Yes |
| Preliminary Exam Required | | Yes | Preliminary Exam Required | | Yes |
| Final Exam/Dissertation Defense Required | | Yes | Final Exam/Dissertation Defense Required | | Yes |
| Dissertation Deposit Required | | Yes | Dissertation Deposit Required | | Yes |
| Minimum GPA: | | 3.25 | Minimum GPA: | | 3.25 |

[1] To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic.

Date Submitted: 01/26/22 2:30 pm

# Viewing: 10KR5504BA : Urban Studies & Planning, BA

Last approved: 01/24/22 11:12 am

Last edit: 02/23/22 3:06 pm

Changes proposed by: Nicole Turner

| | |
|---|---|
| Catalog Pages Using this Program | Urban Studies & Planning: Global Cities, BA<br>Urban Studies & Planning: Policy & Planning, BA<br>Urban Studies & Planning: Social Justice, BA<br>Urban Studies & Planning: Sustainability, BA |

Proposal Type:

## In Workflow

1. **U Program Review**
2. **1733 Committee Chair**
3. **1733 Head**
4. **KR Dean**
5. **University Librarian**
6. **Provost**
7. **Senate EPC**
8. Senate
9. U Senate Conf
10. Board of Trustees
11. IBHE
12. HLC
13. DMI

## Approval Path

1. 01/27/22 10:27 am
   Deb Forgacs (dforgacs):
   Approved for U Program Review
2. 02/08/22 12:35 pm
   Alice Novak (novak2):
   Approved for 1733 Committee Chair
3. 02/08/22 12:49 pm
   Rolf Pendall (rpendall):
   Approved for 1733 Head
4. 02/22/22 10:30 am
   Nicole Turner (nicturn):
   Approved for KR Dean

5. 02/22/22 10:45 am
   John Wilkin (jpwilkin): Approved for University Librarian
6. 02/23/22 3:08 pm
   Kathy Martensen (kmartens): Approved for Provost

## History

1. Mar 28, 2019 by Deb Forgacs (dforgacs)
2. May 1, 2020 by Nicole Turner (nicturn)
3. Jan 4, 2021 by Nicole Turner (nicturn)
4. Jan 24, 2022 by Nicole Turner (nicturn)

Major (ex. Special Education)

This proposal is for a:

Revision

## Administration Details

| | |
|---|---|
| Official Program Name | Urban Studies & Planning, BA |
| Sponsor College | Fine & Applied Arts |
| Sponsor Department | Urban & Regional Planning |
| Sponsor Name | Mary Edwards |
| Sponsor Email | mmedward@illinois.edu |
| College Contact | Nicole Turner |
| College Contact Email | nicturn@illinois.edu |

College Budget Officer: Greg Anderson

College Budget Officer Email: gnanders@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.*

KR Dean

Does this program have inter-departmental administration?

No

## Proposal Title

Effective Catalog Term: Fall 2022

Provide a brief, concise description (not justification) of your proposal.

Administrative approval to revise the BA in Urban Studies & Planning

Revision of undergraduate major to remove 5 credit hours and add 4 credit hours of requirement to core major requirements.

List here any related proposals/revisions and their keys. *Example: This BS proposal (key 567) is related to the Concentration A proposal (key 145) and the Concentration B proposal (key 203).*

## Program Justification

Why are these changes necessary?

Revise the existing BAUSP capstone and workshop requirements with a new approach that includes a loose sequence of Junior/Senior Workshops in the sixth and seventh semesters respectively, and a final semester professional preparation seminar that allows students to showcase their achievements.

1. Remove UP 301 as requirement (-1 hour). This capstone prep course will be incorporated into the newly added UP 347.
2. Remove UP 390/397 as requirement (-3 hours). Requiring an internship or planning project was formally required and will now be a UP major elective toward the required elective hours, if elected by students.
3. Remove 1 hour from UP 401 as requirement (-1 hour). This was a two-semester sequence in senior year and will now be required only for eighth/final semester students.
4. Add UP 347, Junior Planning Workshop, as requirement (+4 hours). Course has not been offered since SP 16 as a 6 hour course and is currently undergoing revision to be a 4 hour course.

5 hours removed, 4 hours added

NOTE: UP 347 is currently in CIM system for revision from 6 to credit hours which will automatically updated course and total credit hours in table below to correct once approved.

## Instructional Resources

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

No

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

No

## 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).

In AY 2016-2017, the Department approved a new protocol for student learning outcomes assessment for all its degree programs (BAUSP, MUP, MSSUM, and Ph.D.). For the BAUSP and MUP programs, we initiated an annual cycle in which a two-person team of Department faculty evaluate the outcomes of one core course per year from each program. Faculty instructors for the courses under review provide access to course materials and completed student work from the semester in question. Other teams review capstone projects of the previous year's MUP students and one of the concentration-specific BAUSP student workshops. For both the course-based and the capstone-based reviews, the assessment teams selected five students at random and assessed their work, basing their assessments upon the degree to which students have met, partially met, or not met the criteria identified for that course on the Curriculum Map.

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

1. General planning knowledge
a. Purpose and Meaning of Planning
b. Planning Theory
c. Planning Law
d. Human Settlements and History of Planning
e. The Future
f. Global Dimensions of Planning
2. Planning skills
a. Research Written, Oral and Graphic Communication
b. Quantitative and Qualitative Methods
c. Plan Creation and Implementation
d. Planning Process Methods
e. Leadership
3. Values and ethics
a. Professional Ethics and Responsibility
b. Governance and Participation
c. Sustainability and Environmental Quality
d. Growth and Development
e. Social Justice

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

No

## Program of Study

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

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

Revised programs 10KR5504BA Urban Studies & Planning, BA Jan 2022.docx

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

Catalog Page Text - Overview Tab

Text for Overview tab on 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

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

**Minimum hours required for graduation:** 120 hours.

---

## Foundation Courses

| Course List | | |
|---|---|---|
| Code | Title | Hours |
| RHET 105 | Writing and Research (or equivalent) | 4 |
| 3-4 hours selected from: | | 3-4 |
| AAS 100 | Intro Asian American Studies | |
| AFRO 100 | Intro to African American St | |
| AIS 102 | Contemp Issues in Ind Country | |
| GGIS 101 | Global Development&Environment | |
| GGIS 104 | Social and Cultural Geography | |
| LLS 100 | Intro Latina/Latino Studies | |
| SOC 100 | Introduction to Sociology | |
| ECON 102 | Microeconomic Principles | 3 |
| or ACE 100 | Introduction to Applied Microeconomics | |
| UP 116 | Urban Informatics I (or equivalent) | 3 |
| or STAT 100 | Statistics | |
| Total Hours | | 13-14 |

## Urban Studies & Planning Core

| Course List | | |
|---|---|---|
| Code | Title | Hours |

| Code | Title | Hours |
|---|---|---|
| UP 101 | Introduction to City Planning | 3 |
| UP 201 | Planning in Action | 3 |
| UP 203 | Cities: Planning & Urban Life | 3 |
| or UP 204 | Chicago: Planning & Urban Life | |
| UP 211 | Local Planning, Gov't and Law | 3 |
| UP 312 | Communication for Planners | 4 |
| UP 316 | Urban Informatics II | 3 |
| UP 347 | Junior Planning Workshop | 4 |
| Select one workshop from: | | 4 |
| UP 447 | Land Use Planning Workshop | |
| UP 455 | Economic Development Workshop | |
| UP 456 | Sustainable Planning Workshop | |
| UP 457 | Small Town/Rural Planning Workshop | |
| UP 478 | Community Development Workshop | |
| Plus 15 hours of UP electives, GE not met by UP foundation & core, and open electives | | 15 |
| UP 401 | Undergraduate Capstone Seminar (Individual portfolio development, networking opportunities, and a culmination event.) | 1 |
| Total Hours | | 43 |

~~Capstone~~

Course List

| ~~Code~~ | ~~Title~~ | ~~Hours~~ |
|---|---|---|
| ~~Capstone Preparation: During the 3rd year, students enroll in UP 301, Capstone Preparation. Students meet individually with their capstone advisor to develop a plan to meet the capstone requirement. To pass this course students must turn in a proposal at the end of the semester.~~ | | ~~1~~ |
| ~~Capstone Experience: Students engage in a semester or summer-long applied activity outside of the classroom. The Capstone Experience is intended to engage the students in the real world and prepare them for the job market. Students typically complete this requirement during their junior year, but have the option to complete it during the summer between their 3rd and 4th year. Examples include a paid or unpaid internship, volunteer work, consulting project with a client, summer research and more. Students enroll in UP 390, Planning Internship, and/or UP 397, Undergraduate Project, to receive credit.~~ | | ~~3~~ |
| ~~Capstone Seminar: During the 4th year, students enroll in UP 401 for 2 semesters. Students will participate in monthly activities to discuss and reflect on the Capstone Experience. In addition, students will present a poster summarizing their capstone experience in a public setting; for example at a public engagement conference, public meeting or community meeting, McNair Scholars conference, James Scholars event, Illinois American Planning Association meeting, undergraduate research symposium, or other venue. The seminar sessions also include career development such as resume writing, interviewing and networking with professionals through the Wetmore Lecture Series.~~ | | ~~2~~ |
| ~~Total Hours~~ | | ~~0~~ |

| | |
|---|---|
| Corresponding Degree | BA Bachelor of Arts |

## Program Features

| | |
|---|---|
| Academic Level | Undergraduate |

Does this major have transcripted concentrations? No

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 303301 - Sustainability Studies.

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 Fall 2022 ~~2020~~

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.
Electing one of the four concentrations is required for graduation.

Describe how critical academic functions such as admissions and student advising are managed.
Students are not admitted directly into a concentration to allow them time to decide which concentration is the best fit for them. Students will continue to receive advising by the undergraduate program director.

## Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No impact.

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 budgetary implications for this revision?
No

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?
n/a

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

## 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.

Attach File(s)

## 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.

With the elimination of UP 301, 390/397 as required, and one semester of 401 this frees up unit resources and allows for the addition of the faculty instructor for the UP 347 requirement.

## 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 revision to the BAUSP.

## EP Documentation

| | |
|---|---|
| EP Control Number | EP.22.110 |
| Attach Rollback/Approval Notices | |
| This proposal requires HLC inquiry | No |

## DMI Documentation

| | |
|---|---|
| Attach Final Approval Notices | |
| Banner/Codebook Name | BA:Urban Stud & Planning -UIUC |

| | |
|---|---|
| Program Code: | 10KR5504BA |

| Minor Code | Conc Code | Degree Code | BA | Major Code |
|---|---|---|---|---|
| 5504 | | | | |

| | |
|---|---|
| Senate Approval Date | |
| Senate Conference Approval Date | |
| BOT Approval Date | |
| IBHE Approval Date | |
| HLC Approval Date | |
| Effective Date: | |
| Attached Document Justification for this request | |
| Program Reviewer Comments | **Deb Forgacs (dforgacs) (01/25/22 2:02 pm):** Rollback: requested<br>**Kathy Martensen (kmartens) (02/23/22 3:05 pm):** Administrative approval: Doesn't change total hours required; doesn't restrict student choice. |

Key: 148

# 10KR5504BA: Urban Studies & Planning, BA

[current]

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

*Minimum hours required for graduation:* *120 hours.*

## Foundation Courses

| | | |
|---|---|---|
| RHET 105 | Writing and Research (or equivalent) | 4 |
| 3-4 hours selected from: | | 3-4 |
| AAS 100 | Intro Asian American Studies | |
| AFRO 100 | Intro to African American St | |
| AIS 102 | Contemp Issues in Ind Country | |
| GEOG 101 | Global Development&Environment | |
| GEOG 104 | Social and Cultural Geography | |
| LLS 100 | Intro Latina/Latino Studies | |
| SOC 100 | Introduction to Sociology | |
| ECON 102<br>or ACE 100 | Microeconomic Principles<br>Introduction to Applied Microeconomics | 3 |
| UP 116<br>or STAT 100 | Urban Informatics I (or equivalent)<br>Statistics | 3 |
| **Total Hours** | | **13-14** |

# 10KR5504BA: Urban Studies & Planning, BA

[proposed]

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

*Minimum hours required for graduation:* *120 hours.*

## Foundation Courses

| | | |
|---|---|---|
| RHET 105 | Writing and Research (or equivalent) | 4 |
| 3-4 hours selected from: | | 3-4 |
| AAS 100 | Intro Asian American Studies | |
| AFRO 100 | Intro to African American St | |
| AIS 102 | Contemp Issues in Ind Country | |
| GEOG 101 | Global Development&Environment | |
| GEOG 104 | Social and Cultural Geography | |
| LLS 100 | Intro Latina/Latino Studies | |
| SOC 100 | Introduction to Sociology | |
| ECON 102<br>or ACE 100 | Microeconomic Principles<br>Introduction to Applied Microeconomics | 3 |
| UP 116<br>or STAT 100 | Urban Informatics I (or equivalent)<br>Statistics | 3 |
| **Total Hours** | | **13-14** |

## Urban Studies & Planning Core

| | | |
|---|---|---|
| UP 101 | Introduction to City Planning | 3 |
| UP 201 | Planning in Action | 3 |
| UP 203<br>or UP 204 | Cities: Planning & Urban Life<br>Chicago: Planning and Urban Life | 3 |
| UP 211 | Local Planning, Government, and Law | 3 |
| UP 312 | Communication for Planners | 4 |
| UP 316 | Urban Informatics II | 3 |
| | | |
| Select one workshop from: | | 4 |
| UP 447 | Land Use Planning Workshop | |
| UP 455 | Economic Development Workshop | |
| UP 456 | Sustainable Planning Workshop | |
| UP 457 | Small Town/Rural Planning Workshop | |
| UP 478 | Community Development Workshop | |
| Plus 15 hours of UP electives, GE not met by UP foundation & core, and open electives | | 15 |
| **Total Hours** | | **38** |

## Capstone

| | |
|---|---|
| Capstone Preparation: During the 3rd year, students enroll in UP 301, Capstone Preparation. Students meet individually with their capstone advisor to develop a plan to meet the capstone requirement. To pass this course students must turn in a proposal at the end of the semester. | 1 |
| Capstone Experience: Students engage in a semester or summer-long applied activity outside of the classroom. The Capstone Experience is intended to engage the students in the real world and prepare them for the job market. Students typically complete this requirement during their junior year, but have the option to complete it during the summer between their 3rd and 4th year. Examples include a paid or unpaid internship, volunteer work, consulting project with a client, summer research and more. Students enroll in UP 390, Planning Internship, and/or UP 397, Undergraduate Project, to receive credit. | 3 |
| Capstone Seminar: During the 4th year, students enroll in UP 401 for 2 semesters. Students will participate in monthly activities to discuss and reflect on the Capstone Experience. In addition. students will present a poster summarizing their capstone experience in a public setting; for example at a public engagement conference, public meeting or community meeting, McNair Scholars conference, James Scholars event, Illinois American Planning Association meeting, undergraduate research symposium, or other venue. The seminar sessions also include career development such as resume writing, interviewing and networking with professionals through the Wetmore Lecture Series. | 2 |
| **Total Hours** | **6** |

## Urban Studies & Planning Core

| | | |
|---|---|---|
| UP 101 | Introduction to City Planning | 3 |
| UP 201 | Planning in Action | 3 |
| UP 203<br>or UP 204 | Cities: Planning & Urban Life<br>Chicago: Planning and Urban Life | 3 |
| UP 211 | Local Planning, Government, and Law | 3 |
| UP 312 | Communication for Planners | 4 |
| UP 316 | Urban Informatics II | 3 |
| UP 347 | Junior Planning Workshop | 4 |
| Select one workshop from: | | 4 |
| UP 447 | Land Use Planning Workshop | |
| UP 455 | Economic Development Workshop | |
| UP 456 | Sustainable Planning Workshop | |
| UP 457 | Small Town/Rural Planning Workshop | |
| UP 478 | Community Development Workshop | |
| Plus 15 hours of UP electives, GE not met by UP foundation & core, and open electives | | 15 |
| UP 401 | Undergraduate Capstone Seminar (Individual portfolio development, networking opportunities, and a culmination event.) | 1 |
| **Total Hours** | | **43** |

Date Submitted: 01/24/22 4:49 pm

# Viewing: 5066 : Business for Non-Business Majors Minor, UG

Last approved: 03/05/21 3:52 pm

Last edit: 02/24/22 11:55 am

Changes proposed by: Chaya Sandler

| | |
|---|---|
| Catalog Pages Using this Program | Business Minor for Non-Business Majors |

Proposal Type:

## In Workflow

1. **U Program Review**
2. **1902 Committee Chair**
3. **1902 Head**
4. **KM Committee Chair**
5. **KM Dean**
6. **University Librarian**
7. **Provost**
8. **Senate EPC**
9. Senate
10. U Senate Conf
11. Board of Trustees
12. IBHE
13. HLC
14. DMI

## Approval Path

1. 01/25/22 3:20 pm Deb Forgacs (dforgacs): Approved for U Program Review
2. 01/25/22 4:31 pm Brian Fulton (bfulton): Approved for 1902 Committee Chair
3. 01/26/22 7:13 pm Carlos Torelli (ctorelli): Approved for 1902 Head
4. 02/04/22 5:58 pm Jiekun Huang (huangjk): Approved for KM Committee Chair
5. 02/23/22 9:59 pm Mark Peecher

(peecher): Approved for KM Dean
6. 02/23/22 10:12 pm
John Wilkin (jpwilkin): Approved for University Librarian
7. 02/24/22 11:56 am
Kathy Martensen (kmartens): Approved for Provost

## History

1. Jan 18, 2019 by Deb Forgacs (dforgacs)
2. Jun 3, 2019 by Deb Forgacs (dforgacs)
3. Mar 3, 2021 by Jeff Headtke (jheadtke)
4. Mar 5, 2021 by Deb Forgacs (dforgacs)

Minor (ex. European Union Studies)

This proposal is for a:
Revision

## Administration Details

| | |
|---|---|
| Official Program Name | Business for Non-Business Majors Minor, UG |
| Sponsor College | Gies College of Business |
| Sponsor Department | Business Administration |
| Sponsor Name | Chaya Sandler ~~Jeff Headtke, Academic Coordinator & Student Advisor~~ |

Sponsor Email csandle2@illinois.edu ~~jheadtke@illinois.edu~~

College Contact Kevin Jackson, Associate Dean Gies College of Business

College Contact Email kjack@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.*

Chaya Sandler, Cory Ohms

Does this program have inter-departmental administration?

No

## Proposal Title

Effective Catalog Term Fall 2022

Provide a brief, concise description (not justification) of your proposal.

Administrative approval to revise the undergraduate minor in Business

Remove BADM elective course, replace with BADM 275. Add 2 FIN courses as elective options for minor.

List here any related proposals/revisions and their keys. *Example: This BS proposal (key 567) is related to the Concentration A proposal (key 145) and the Concentration B proposal (key 203).*

## Program Justification

Why are these changes necessary?

The BADM department has changed the BADM 375 course material to be unsuited for business minor students. BADM will offer BADM 275 in summer and winter terms as a replacement elective.

The FIN department is offering online sections of FIN courses to business minors with course subjects aligned with business minor student interests.

## 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

FIN 241 - Fundamentals of Real Estate
FIN 435 - Personal Wealth Management

Explain how the inclusion or removal of the courses/subjects listed above impacts the offering departments.

The FIN department has created online sections for business minor students to have access to 241 and 435 as elective options for the minor.

Attach letters of support or acknowledgement from other departments.

RE_ Business Minor -Finance Courses.pdf

## 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 Business Minor is designed to offer our campus's Undergraduate Students an opportunity to learn fundamental Accounting, Finance, Management, and Marketing skills used in business. The Gies College will periodically examine the utilities of the Business Minor Elective courses to ensure the academic quality of the Business Minor.

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.*

An undergraduate minor should consist of at least 16 - and no more than 21 hours - of course work, with at least 6 hours of 300- or 400- level courses. Except clearly remedial offerings, prerequisite courses within the sponsoring unit count towards the total; prerequisite courses outside the sponoring unit do not count

toward this total. The unit sponsoring the minor and that unit's college may set educationally necessary prerequisites for eligibility for the minor within these constraints. Does this proposal meet these criteria?

Yes

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

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

Catalog Page Text - Overview Tab

Text for Overview tab on 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.

Please refer to the Business Minor website for further information.

The Business Minor is for students earning undergraduate degrees in colleges other than the Gies College of Business. The Business Minor provides coursework through which Non-Business students learn skills used in business. The Business Minor is not available to Gies College students and Technology and Management Minor students. The Business Minor is not to be considered as preparation for transfer into the Gies College to earn an undergraduate Business degree.

To declare their Minors, Non-Business students must submit their Statement of Intent to Pursue a Campus-Approved Minor (Statements) to 1055 Business Instructional Facility (BIF) at any time.

1. Please note that not every Business Minor course will be offered every Fall and Spring Semesters, Winter Term and Summer Sessions. Students must select judiciously and enroll in the Business Minor courses when they are offered throughout any academic year.

2. Business Minor Students and Prospective Business Minor Students must register for the online sections of all Minor courses if online sections are offered.

3. Business Minor course enrollment instructions are noted in the fall and spring semesters, winter term, and summer session Class Schedule course’s Section Detail & Information in Course Explorer. Students must complete all Business Minor course prerequisites. Students who have not completed a Minor course's prerequisite will have their enrollment canceled in that specific course by the academic departments.

4. A minimum number of off-campus transfer courses will be permitted to fulfill the Minor Core and Elective Course Requirements. You should use the Transferology Program to confirm the off-campus course's transferability to fulfill the Minor requirements. You may confirm with the Business Minor Program if a proposed off-campus course will fulfill the Minor requirements.

5. Courses taken through a University of Illinois's Study Abroad Programs will fulfill the Business Minor Core and Elective Course Requirements. These requirements are fulfilled only if the course taken exactly matches course articulations of the Gies Business course. For example, the study abroad exact equivalent course to our campus’s BADM 380 course is an acceptable Business Minor Elective course. Study Abroad BADM 3- - and BADM 4- - courses will not fulfill the Minor’s Core and Elective Course Requirements. In addition, Minor Core and Elective Course Requirements are not fulfilled with study abroad courses in Finance, Information Systems, Operations Management, Management, Marketing, and Supply Chain Management.

The Business Minor is designed to be completed within three academic years. Gies College of Business cannot guarantee minor completion.

Contact busminor@business.illinois.edu to address academic questions.

Statement for Programs of Study Catalog

**Minimum required Minor and supporting course work**: All six Business Minor courses must be earned with Letter Grades. Sophomore standing required to enroll in the four Core Courses. For all Business Minor courses for which online delivery is available, students pursuing the Minor ***must enroll*** in the online sections.

Course List

| Code | Title | Hours |
|---|---|---|
| Core Courses Requirement | | 12 |
| ACCY 200 | Fundamentals of Accounting | 3 |
| OR | | |
| ACCY 201 | Accounting and Accountancy I | |
| & ACCY 202 | and Accounting and Accountancy II | |
| BADM 310 | Mgmt and Organizational Beh | 3 |
| BADM 320 | Principles of Marketing | 3 |
| FIN 221 | Corporate Finance (ECON 102 or ECON 103 is the prerequisite) | 3 |
| Elective Courses Requirement | Choose ONLY 2 from the following | 6 |
| BADM 275 | Fundamentals of Operations Management | |
| BADM 300 | The Legal Environment of Bus | |
| BADM 311 | Leading Individuals and Teams | |
| BADM 312 | Designing and Managing Orgs | |
| BADM 313 | Strategic Human Resource Management | |
| BADM 314 | Leading Negotiations | |
| BADM 323 | Marketing Communications | |
| BADM 326 | Pricing Strategy | |
| BADM 340 | Ethical Dilemmas of Business | |
| BADM 350 | IT for Networked Organizations | |
| ~~BADM 375~~ | ~~Operations Strategy~~ | |
| BADM 380 | International Business | |
| BADM 381 | Multinational Management | |
| FIN 230 | Introduction to Insurance | |
| FIN 241 | Fundamentals of Real Estate | |
| FIN 435 | Personal Wealth Management | |

## Other Requirements

Grad Other Degree Requirements

| Requirement | Description |
|---|---|
| Minimum 300- or 400- level credit hours | 6 |
| Minimum of six hours of coursework must be distinct from credits earned for the student's major or another minor. | 6 |
| Minimum GPA to earn the minor: | 2.00 |

~~1ECON 102 or ECON 103 is the prerequisite.~~

## Program Features

Academic Level: Undergraduate

Is this minor?

A Comprehensive study in a single discipline

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Other than certification via the students' degree audits, is there any additional planned mechanism to award/honor successful completion of the minor?

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:

Business Minor and Prospective Business Minor students must register for the online sections of all the Minor courses if online sections are offered. Business Minor Core and Elective courses will be offered every fall and spring semester, summer session, and winter term.

See attached email in EP Documentation section for further elaboration on delivery method.

## Enrollment

Will the department limit enrollment to the minor?

No

Describe how the department will monitor the admission to/enrollment in the minor.

The Business Minor no longer requires a comprehensive admission policy and procedures. The Minor can be earned by our campus's undergraduate students. Enrollment in Business Minor courses will be limited to the Minor courses's enrollment capacities.

Are there any prerequisites for the proposed minor?

Yes

List the prerequisites including course titles and number of credit hours for each prerequisite course, and whether or not these prerequisites count in the total hours required for the minor.

The only prerequisite course now required to earn the Business Minor is either our campus's ECON 102 OR ECON 103 course for enrollment in the Business Minor’s Core FIN 221 course.

ECON 102- Microeconomic Principles- 3 credits
ECON 103- Macroeconomic Principles- 3 credits

The ECON 102 and ECON 103 course credits do not count toward the 18 credits required to earn the Business Minor.

Describe how this revision will impact enrollment and degrees awarded.

This revision will not impact enrollment or degrees awarded.

## Budget

Are there budgetary implications for this revision? No

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?
No

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

## 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.

Attach File(s)

## 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 FIN 241 and 435 as elective options.

## EP Documentation

| | |
|---|---|
| EP Control Number | EP.22.110 |
| Attach Rollback/Approval Notices | |
| This proposal requires HLC inquiry | No |

## DMI Documentation

| | |
|---|---|
| Attach Final Approval Notices | |
| Banner/Codebook Name | Business |
| Program Code: | 5066 |

| Minor Code | Conc Code | Degree Code | Major Code |
|---|---|---|---|
| 5066 | | | |

| | |
|---|---|
| Senate Approval Date | |
| Senate Conference Approval Date | |
| BOT Approval Date | |
| IBHE Approval Date | |
| HLC Approval Date | |
| Effective Date: | |
| Attached Document Justification for this request | |
| Program Reviewer Comments | **Deb Forgacs (dforgacs) (01/24/22 4:17 pm):** Rollback: requested.<br>**Deb Forgacs (dforgacs) (01/24/22 4:43 pm):** Rollback: requested<br>**Kathy Martensen (kmartens) (02/24/22 11:54 am):** Administrative approval: No change to total hours required; doesn't restrict student choice. |

Key: 462

| | |
|---|---|
| **From:** | Richmond, Hanna C |
| **To:** | Sandler, Chaya S |
| **Cc:** | Ohms, Cory J |
| **Subject:** | RE: Business Minor - Finance Courses |
| **Date:** | Monday, January 24, 2022 10:18:59 AM |
| **Attachments:** | image001.png |

Hi Chaya,
Yes, FIN acknowledges that we would like to add FIN 241 and FIN 435 as electives to the business minor.

Thanks!
Hanna

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**From:** Sandler, Chaya S <csandle2@illinois.edu>
**Sent:** Monday, January 24, 2022 10:18 AM
**To:** Richmond, Hanna C <hrichmnd@illinois.edu>
**Cc:** Ohms, Cory J <cohms@illinois.edu>
**Subject:** RE: Business Minor - Finance Courses

Hello Hanna,

We are submitting the CIM changes for adding the 2 FIN electives. Would you be able to send me an email acknowledging FIN wants to add in the 2 electives to the business minor for non-majors? It looks like we have the sections for 241 and 435 for fall.

Best,
Chaya

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**From:** Richmond, Hanna C <hrichmnd@illinois.edu>
**Sent:** Tuesday, October 5, 2021 9:58 AM
**To:** Sandler, Chaya S <csandle2@illinois.edu>; Ohms, Cory J <cohms@illinois.edu>
**Subject:** RE: Business Minor - Finance Courses

We would start these in the fall of 2022.

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**From:** Sandler, Chaya S <csandle2@illinois.edu>
**Sent:** Tuesday, October 5, 2021 9:57 AM
**To:** Ohms, Cory J <cohms@illinois.edu>; Richmond, Hanna C <hrichmnd@illinois.edu>
**Subject:** FW: Business Minor - Finance Courses

Hello,

Thank you for the quick reply. Do you know what semester we would begin offering the online sections?