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EP.21.020
November 16, 2020

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

EP.21.020 Report of Administrative Approvals through November 2, 2020

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 November 2, 2020. Additional information for each approval is attached.

A. Graduate Programs

1) **Art Education, MA –** *remove* ARTE 402, Artistic Development, (3 or 4 hours), which is no longer taught in that program, and *add* ARTE 591, Independent Graduate Studies (2 hours), and ARTE 593, Survey: Qualitative Methodologies (4 hours). Add a choice between ARTE 401, Issues in Art Education (4 hours) or ARTE 505, Foundations of Art Education (4 hours). There is no change in total hours required for the program.
2) **Art Education, EDM -** *remove* ARTE 402, Artistic Development (3 or 4 hours), which is no longer taught in the program, and *add* ARTE 501, Issues in Art Education (4 hours) and ARTE 591, Independent Graduate Studies (1 to 2 hours), to the list of required courses. There is no change in total hours required for the program.
3) **Informatics, PhD** – the following changes are primarily the result of the renumbering project undertaken for all IS rubric courses in the past year. There is no change in total hours required for the program.
    - In the list of Applications Courses from which students select two courses, *remove* IS 518, Seminar in Information Services (4 hours) and IS 549, Practicum (4 hours) and *add* IS 506, Human-Centered Information Systems (4 hours); IS 520, Community Informatics (4 hours); IS 524, Data Governance (2 or 4 hours); IS 525, Data Warehousing (4 hours); IS 566, Internet of Things (4 hours); IS 557, Applied Machine Learning: Team Projects (4 hours); and IS 586, Usability Engineering (4 hours).
    - In the list of Foundations Courses from which students select two courses, *remove* IS 532, School Library Management (4 hours); IS 542, Research and Inquiry for Youth (4 hours); IS 543, Digital Preservation (4 hours); IS 556, Internet of Things (4 hours); IS 559, CAS Project (4 hours); IS 561, Use and Users of Information (4 hours), and IS 562, Administration and Use of Archival Materials (4 hours) and *add* IS 504, Sociotechnical Information Systems (4 hours); IS 507, Data, Statistical Models and Information (4 hours); IS 515, Information Modeling (4 hours); IS 517, Methods of Data Science (4 hours); IS 519, Research Design in Information Science (4 hours); IS 527, Network Analysis (4 hours); IS 537, Theory & Practice of Data Cleaning; IS 547, Foundations of Data Curation (4 hours); IS 545, Advanced Data Visualization (4 hours); IS 575, Metadata in Theory & Practice (4 hours); IS 577, Data Mining (2 or 4 hours);

IS 596, Advanced Topics in Human-Centered Design & Systems, Section D: Implement Info Stor& Retr (2 or 4 hours).

4) **Informatics, MS** – in the list of Computer Science and Informatics courses from which students are to choose one course (4 hours), *remove* IS 542, Research and Inquiry for Youth (4 hours) and *add* IS 507, Data, Statistical Models and Information. There is no change in total hours required for the program.
5) **Crop Sciences concentration in the MS in Informatics** – in the list of Computer Science and Informatics courses from which students are to choose one course (4 hours), *remove* IS 542, Research and Inquiry for Youth (4 hours) and *add* IS 507, Data, Statistical Models and Information. There is no change in total hours required for the program.

10KS0169EDM: ART EDUCATION, EDM

In Workflow

1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
2. 1526 Head (mpokorny@illinois.edu)
3. KR Dean (nicturn@illinois.edu; mmedward@illinois.edu)
4. University Librarian (jpwilkin@illinois.edu)
5. Grad_College (agrindly@illinois.edu; jch@illinois.edu; lowry@illinois.edu)
6. COTE Programs (nilatha@illinois.edu; bmclvngr@illinois.edu)
7. Provost (kmartens@illinois.edu)
8. Senate EPC (bjlehman@illinois.edu; kmartens@illinois.edu; moorhouz@illinois.edu)
9. Senate (jtempel@illinois.edu)
10. U Senate Conf (none)
11. Board of Trustees (none)
12. IBHE (none)
13. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

Approval Path

1. Tue, 15 Sep 2020 14:36:58 GMT
   Deb Forgacs (dforgacs): Approved for U Program Review
2. Tue, 15 Sep 2020 15:19:20 GMT
   Melissa Pokorny (mpokorny): Approved for 1526 Head
3. Thu, 08 Oct 2020 18:25:04 GMT
   Nicole Turner (nicturn): Approved for KR Dean
4. Thu, 08 Oct 2020 19:27:25 GMT
   John Wilkin (jpwilkin): Approved for University Librarian
5. Wed, 14 Oct 2020 16:53:47 GMT
   Allison McKinney (agrindly): Approved for Grad_College
6. Wed, 14 Oct 2020 20:33:09 GMT
   Brenda Clevenger (bmclvngr): Approved for COTE Programs
7. Tue, 20 Oct 2020 18:59:10 GMT
   Kathy Martensen (kmartens): Approved for Provost

History

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

Date Submitted:Mon, 14 Sep 2020 19:18:31 GMT

Viewing:10KS0169EDM : Art Education, EDM

Changes proposed by: Nicole Turner

Proposal Type

Proposal Type:

Major (ex. Special Education)

This proposal is for a:

Revision

Proposal Title:

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

Administrative approval: Revisions to required coursework for the Art Education, EDM
related to the Art Education, MA coursework revision (key 29)

EP Control Number

EP.21.020

Official Program Name

Art Education, EDM

Effective Catalog Term

Fall 2021

Sponsor College

Fine & Applied Arts

Sponsor Department

Art and Design

Sponsor Name

Sarah Travis

Sponsor Email

stravis2@illinois.edu

College Contact

Nicole Turner

College Contact Email

nicturn@illinois.edu

Program Description and Justification

Justification for proposal change:

The proposed curriculum reflects current course offerings and removes outdated course offerings from the degree requirements for the EdM (submitted here) and MA in Art Education (key 29).

We removed ARTE 402: Artistic Development from the Curriculum because it is a class that is no longer taught in the program.

We added ARTE 501: Issues in Art Education, which is a topical issues class for graduate-level art educators.

We added ARTE 591: Independent Graduate Studies, a forum for Art Education graduate students which meets once a month in each fall semester.

Additional details regarding the faculty review of the curriculum are provided in the Program Regulation section below.

Corresponding Degree

EdM Master of Education

Is this program interdisciplinary?

No

Academic Level

Graduate

Will you admit to the concentration directly?

No

Is a concentration required for graduation?

No

CIP Code

131302 - Art Teacher Education.

Is This a Teacher Certification Program?

Yes

Will specialized accreditation be sought for this program?

No

Admission Requirements

Desired Effective Admissions Term

Fall 2021

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

No

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

Applicants for admission must hold a bachelor's degree in art education or a related field from an accredited institution.

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

Admission is determined by a review of transcripts, letters of recommendation, resume, personal statement, and a writing sample. Art Education conducts an annual review of all of its enrolled students. The review helps students by identifying and clarifying academic expectations, opportunities and deficiencies. It is based on a self-report that should serve the student as a guide to the program and as a continuing record of academic progress. Students are required to keep their own record continuing semester by semester.The review requires students to complete the Annual Review Form, sent to them each year toward the end of the Spring semester. The form requests information about the student's academic accomplishments and the completion of specific program requirements.The Program faculty, acting as an Annual Academic Progress Review Committee, meets in a timely way to review the information provided by students. They write a draft of an evaluation of each student's performance and suggest goals for the coming academic year. Students are given a copy of this draft and are asked to meet with their advisor to discuss it. They may then submit written comments/ responses to the draft review if they wish. The Review Committee then finalizes its review and sends a copy to each student. The student's advisor retains a final copy.

Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No impact.

Estimated Annual Number of Degrees Awarded

What is the matriculation term for this program?

Fall

What is the typical time to completion of this program?

2 years (minimum of 1 year, extended due to pursuit of teacher licensure)

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

32 credit hours

Delivery Method

Is this program available on campus and online?

No

This program is available:

On Campus

Budget

Are there budgetary implications for this revision?

No

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

No

Additional Budget Information

NA

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

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 impact

Library Resources

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

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

Instructional Resources

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

No

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

No

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

No

Financial Resources

How does the unit intend to financially support this proposal?

No impact on budget or resources

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

No

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

No

Is this program requesting self-supporting status?

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 EdM program provides advanced level study for art educators. The program's objectives are to enable participants to: 1.Become familiar with key debates and concepts in art education 2.Develop the capacity to reflect on and to analyze their own practices in art education 3.Gain a deeper insight of the role of art and visual culture in education and everyday life 4.Develop a critical understanding of both theoretical and practical perspectives on art education and general education 5.Develop the ability to contribute to informed development of policy and practice in arts education and general education.

In the last five years, Art Education has made significant changes to the EdM program based on informal assessment evidence. One change we have made is to add electives to the curriculum to address changing needs in the field. As an example, the elective course ARTE 501 Research Methods in the Social Sciences was created to address recognized discrepancies in students' understanding of the variety of research methodologies typically utilized in the field of art education. This course has become ARTE 593 Survey of Qualitative Methodologies. Likewise, the elective course ARTE 475 Exhibition Practices was developed to address the intersection of exhibition and art education practices and address the National Art Education Standards that incorporate understandings of presentation from artistic, curatorial, education, and viewer perspectives. The purpose of this course is to understand how to develop an exhibition from conception to installation. The key question addressed through this course is, "What makes an exhibition?" Elements of exhibitions are explored through readings, videos, and images and include exhibition development, interpretation, marketing and promotion strategies, and education. The course consists of two parts: first, the study of contemporary exhibition practices, and second, executing the class exhibition project. Students consider the purpose of exhibition as they select and present work to create a meaningful engagement or experience for the viewer. Similarly, the elective course ARTE 501 Contemporary Art Practice as Pedagogy was created to extend the conversation that has emerged in contemporary art practices around and about education. The course's curriculum consist of critical readings about education written by art theorists and artists, while simultaneously offering important texts about contemporary art offered by art education scholars. Most importantly the course offers the opportunity to study materials and cases that exists in-between these two conversations. Many of these "in-between" examples are frequently categorized—although not limited—by terms such as social practice, participatory art, socially engaged art, the art or civic engagement and various forms of conceptual art such as performance art, activist art, and non-object oriented (or dematerialized) art. Students learn to read difficult philosophical texts carefully and discern how these disparate areas of study synthesize with the work they are doing in their respective areas of study. Papers are written for potential publication and an end-of -the-semester symposium is held and open to the school community. Additionally, the elective course ARTE 501 Teaching at the College Level was created to examine the frequently under-examined philosophies, curriculums, customs, and pedagogies of post-secondary teaching. A wide net is cast to examine college level art teaching in the U.S., the UK, Asia, Australia, and South America. Undergraduate and graduate level art education is examined and students—who are mostly preparing to become college teachers themselves—develop an institutional literacy that prepares them professionally for the complexities and nuance of teaching at a number of institutions including research heavy or teaching heavy institutions. Themes covered in this course include curriculum development, critique practices, assessment of learning, professional customs and practices, citation practices, artist-teacher theories, and the history and evolution of contemporary college level pedagogy. Students bring together their roles as teaching assistants and instructors of record at the university with the theories and examples examined in this course to write a comprehensive research paper, syllabi, and teaching statement. In contrast, ARTE 402 Artistic Development has been discontinued because other courses picked up some of the topics that were offered in this course. It has become increasingly important for the department to teach artistic development of the practitioner (not the K-12 student) throughout the graduate curriculum and therefore this course has become obsolete, even though this subject is covered sufficiently in our other courses. K-12 student artistic development has become a contested area of study, which as a faculty we've decided to address in undergraduate pre-service courses.

Methods of evaluation include evidence of writing acuity in final papers of courses; course discussions; student's teaching evaluations; academic and non-academic job placement; course discussions.

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

Art EdEdM_side by side.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

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

Graduate study in Art Education at the University of Illinois at Urbana-Champaign is designed for students who want to engage in a broad and critical intellectual exploration of contemporary questions and debates in arts and education. At Illinois, faculty and graduate students build a vibrant community of inquiry within the context of a Research 1 university. This community, including faculty whose breadth of interests span topics including contemporary art and visual culture in education, formal and informal learning, cultural policy and urban studies, and teacher training and identity, provides a richly stimulating environment for graduate students to stretch themselves as art educators and scholars.The program of study leading to the degree of Master of Education (EdM) in Art Education is designed to provide advanced level study for students of two main kinds. It serves as professional development for art teachers and supervisors in the public schools and as preparation for those interested in a variety of other careers, such as museum education, arts advocacy, or community arts.

Statement for Programs of Study Catalog

Code	Title	Hours
ARTE 402	Artistic Development	3 or 4
ARTE 501	Issues in Art Education	4
ARTE 502	Curriculum Development in Art	4
ARTE 505	Foundations of Art Education	4
ARTE 591	Independent Graduate Studies	1 to 2
Electives		18+
Total Hours		**32**

Other Requirements

Requirement	Description
Other requirements may overlap	
Candidates must spend at least two semesters or the equivalent in residence.	
Minimum 500-level Hours Required Overall:	12
Certification requirements, if needed	40-44
Minimum GPA:	2.75

EP Documentation

DMI Documentation

Banner/Codebook Name

EDM: Art Education -UIUC

Program Code:

10KS0169EDM

Degree Code

EDM

Major Code

0169

Program Reviewer Comments

Deb Forgacs (dforgacs) (Fri, 04 Sep 2020 21:21:53 GMT): Rollback: requested
Kathy Martensen (kmartens) (Tue, 20 Oct 2020 18:58:59 GMT): Admin approval: No change to total hours required/doesn't restrict course options.

Key: 32

10KS0169EDM: Art Education, EdM

[current]

Code	Title
ARTE 402	Artistic Development
ARTE 502	Curriculum Development in Art
ARTE 505	Foundations of Art Education
Electives	
Total Hours	

[proposed]

Code	Title	Hours
ARTE 501	Issues in Art Education	4
ARTE 502	Curriculum Development in Art	4
ARTE 505	Foundations of Art Education	4
ARTE 591	Independent Graduate Studies	1 to 2
Electives		18+
Total Hours		**32**

Other Requirements[1]

Requirement	Description
Other requirements may overlap	
Candidates must spend at least two semesters or the equivalent in residence.	
Minimum 500-level Hours Required Overall:	12
Certification requirements, if needed	40-44
Minimum GPA:	2.75
Grad Other Degree Requirements	

[1] *For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook.*

Other Requirements

Requirement	Description
Other requirements may overlap	
Candidates must spend at least two semesters or the equivalent in residence.	
Minimum 500-level Hours Required Overall:	12
Certification requirements, if needed	40-44
Minimum GPA:	2.75
Grad Other Degree Requirements	

10KS0169MA: ART EDUCATION, MA

In Workflow

1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
2. 1526 Head (mpokorny@illinois.edu)
3. KR Dean (nicturn@illinois.edu; mmedward@illinois.edu)
4. University Librarian (jpwilkin@illinois.edu)
5. Grad_College (agrindly@illinois.edu; jch@illinois.edu; lowry@illinois.edu)
6. COTE Programs (nilatha@illinois.edu; bmclvngr@illinois.edu)
7. Provost (kmartens@illinois.edu)
8. Senate EPC (bjlehman@illinois.edu; kmartens@illinois.edu; moorhouz@illinois.edu)
9. Senate (jtempel@illinois.edu)
10. U Senate Conf (none)
11. Board of Trustees (none)
12. IBHE (none)
13. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

Approval Path

1. Tue, 15 Sep 2020 14:36:03 GMT
   Deb Forgacs (dforgacs): Approved for U Program Review
2. Tue, 15 Sep 2020 15:19:25 GMT
   Melissa Pokorny (mpokorny): Approved for 1526 Head
3. Thu, 08 Oct 2020 18:25:22 GMT
   Nicole Turner (nicturn): Approved for KR Dean
4. Thu, 08 Oct 2020 19:28:15 GMT
   John Wilkin (jpwilkin): Approved for University Librarian
5. Wed, 14 Oct 2020 16:53:50 GMT
   Allison McKinney (agrindly): Approved for Grad_College
6. Wed, 14 Oct 2020 20:33:27 GMT
   Brenda Clevenger (bmclvngr): Approved for COTE Programs
7. Tue, 20 Oct 2020 18:59:34 GMT
   Kathy Martensen (kmartens): Approved for Provost

History

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

Date Submitted:Mon, 14 Sep 2020 19:19:50 GMT

Viewing:10KS0169MA : Art Education, MA

Changes proposed by: Nicole Turner

Proposal Type

Proposal Type:

Major (ex. Special Education)

This proposal is for a:

Revision

Proposal Title:

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

Administrative approval: Revision to MA Art Education required courses.
related to the Art Education, EDM coursework revision (key 32)

EP Control Number

EP.21.020

Official Program Name

Art Education, MA

Effective Catalog Term

Fall 2021

Sponsor College

Fine & Applied Arts

Sponsor Department

Art and Design

Sponsor Name

Sarah Travis

Sponsor Email

stravis2@illinois.edu

College Contact

Nicole Turner

College Contact Email

nicturn@illinois.edu

Program Description and Justification

Justification for proposal change:

The proposed curriculum reflects current course offerings and removes outdated course offerings from the degree requirements for the EdM (key 32) and MA in Art Education (submitted here).

We removed ARTE 402: Artistic Development from the Curriculum because it is a class that is no longer taught in the program.

We added a choice between ARTE 505: Foundations of Art Education or ARTE 501: Issues in Art Education.

We added ARTE 591: Independent Graduate Studies, a forum for Art Education graduate students meets once a month in each fall semester.

We added ARTE 593: Survey: Qualitative Methodologies.

Additional details regarding the faculty review of the curriculum are provided in the Program Regulation section below.

Corresponding Degree

MA Master of Arts

Is this program interdisciplinary?

No

Academic Level

Graduate

Will you admit to the concentration directly?

No

Is a concentration required for graduation?

No

CIP Code

131302 - Art Teacher Education.

Is This a Teacher Certification Program?

Yes

Will specialized accreditation be sought for this program?

No

Admission Requirements

Desired Effective Admissions Term

Fall 2021

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

No

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

Applicants for admission must hold a bachelor's degree in art education or a related field from an accredited institution. Admission is determined by a review of transcripts, letters of recommendation, resume, personal statement, and a writing sample.

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

Admission is determined by a review of transcripts, letters of recommendation, resume, personal statement, and a writing sample.

Art Education conducts an annual review of all of its enrolled students. The review helps students by identifying and clarifying academic expectations, opportunities and deficiencies. It is based on a self-report that should serve the student as a guide to the program and as a continuing record of academic progress. Students are required to keep their own record continuing semester by semester. The review requires students to complete the Annual Review Form, sent to them each year toward the end of the Spring semester. The form requests information about the student's academic accomplishments and the completion of specific program requirements. The Program faculty, acting as an Annual Academic Progress Review Committee, meets in a timely way to review the information provided by students. They write a draft of an evaluation of each student's performance and suggest goals for the coming academic year. Students are given a copy of this draft and are asked to meet with their advisor to discuss it. They may then submit written comments/responses to the draft review if they wish. The Review Committee then finalizes its review andsends a copy to each student. The student's advisor retains a final copy.

Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No impact

Estimated Annual Number of Degrees Awarded

What is the matriculation term for this program?

Fall

What is the typical time to completion of this program?

2 years (minimum of 1.5 years, extended due to pursuit of teacher licensure)

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

32

Delivery Method

Is this program available on campus and online?

No

This program is available:

On Campus

Budget

Are there budgetary implications for this revision?

No

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

No

Additional Budget Information

NA

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

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 impact

Library Resources

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

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

Instructional Resources

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

No

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

No

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

No

Financial Resources

How does the unit intend to financially support this proposal?

No impact/no changes

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

No

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

No

Is this program requesting self-supporting status?

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 MA program provides advanced level study for art educators. The program's objectives are to enable participants to:
1.Become familiar with key debates and concepts in art education
2.Develop the capacity to reflect on and to analyze their own practices in art education
3.Gain a deeper insight of the role of art and visual culture in education and everyday life
4.Develop a critical understanding of both theoretical and practical perspectives on art education and general education
5.Develop the ability to contribute to informed development of policy and practice in arts education and general education

6.Preparation for a variety of careers, such as museum education, community arts, arts advocacy, arts policy formation
7.Professional development for art teachers and supervisors in the public schools
8.Preparation for future studies at the doctoral level.

Over the last five years, Art Education has made significant changes to the MA program based on informal assessment evidence. One change we have made is to add electives to the curriculum to address changing needs in the field. As an example, the elective course ARTE 501 Research Methods in the Social Sciences was created to address recognized discrepancies in students' understanding of the variety of research methodologies typically utilized in the field of art education. This course has become ARTE 593 Survey of Qualitative Methodologies and will be proposed as a required course. Likewise, the elective course ARTE 475 Exhibition Practices was developed to address the intersection of exhibition and art education practices and address the National Art Education standards that incorporate understandings of presentation from artistic, curatorial, education, and viewer perspectives. The purpose of this course is to understand how to develop an exhibition from conception to installation. The key question addressed through this course is, "What makes an exhibition?" Elements of exhibitions are explored through readings, videos, and images and include exhibition development, interpretation, marketing and promotion strategies, and education. The course consists of two parts: first, the study of contemporary exhibition practices, and second, executing the class exhibition project. Students consider the purpose of exhibition as they select and present work to create a meaningful engagement or experience for the viewer.Similarly, the elective course ARTE 501 Contemporary Art Practice as Pedagogy was created to extend the conversation that has emerged in contemporary art practices around and about education. The course's curriculum consist of critical readings about education written by art theorists and artist, while simultaneously offering important texts about contemporary art offered by art education scholars. Most importantly the course offers the opportunity to study materials and cases that exists in-between these two conversations. Many of these "in-between" examples are frequently categorized—although not limited—by terms such as social practice, participatory art, socially engaged art, the art or civic engagement and various forms of conceptual art such as performance art, activist art, and non-object oriented (or dematerialized) art. Students learn to read difficult philosophical texts carefully and discern how these disparate areas of study synthesize with the work they are doing in their respective areas of study. Papers are written for potential publication and an end-of -the-semester symposium is held and open to the school community. Additionally, the elective course ARTE 501 Teaching at the College Level was created to examine the frequently under-examined philosophies, curriculums, customs, and pedagogies of post-secondary teaching. A wide net is cast to examine college level art teaching in the U.S., the UK, Asia, Australia, and South America. Undergraduate and graduate level art education is examined and students—who are mostly preparing to become college teachers themselves—develop an institutional literacy that prepares them professionally for the complexities and nuance of teaching at a number of institutions including research heavy or teaching heavy institutions. Themes covered in this course include curriculum development, critique practices, assessment of learning, professional customs and practices, citation practices, artist-teacher theories, and the history and evolution of contemporary college level pedagogy. Students bring together their roles as teaching assistants and instructors of record at the university with the theories and examples examined in this course to write a comprehensive research paper, syllabi, and teaching statement. In contrast, ARTE 402 Artistic Development has been discontinued because other courses picked up some of the topics that were offered in this course. It has become increasingly important for the department to teach artistic development of the practitioner (not the K-12 student) throughout the graduate curriculum and therefore this course has become obsolete, even though this subject is covered sufficiently in our other courses. K-12 student artistic development has become a contested area of study, which as a faculty we've decided to address in undergraduate pre-service courses. One current formal assessment practice that we have continued in the last five years is the completion and submittal of a 50-75 pages Master's Thesis. Besides the advisor, a second committee member must read over and approve the material, making suggestions before the thesis may be deposited to the graduate college. We believe this is an effective means of checks and balances.
Methods for assessment include writing acuity in final papers of courses; course discussions; student's teaching evaluations; advising meetings; thesis; academic and non-academic job placement

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

MA_art ed_side by side.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

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

Graduate study in Art Education at the University of Illinois at Urbana-Champaign is designed for students who want to engage in a broad and critical intellectual exploration of contemporary questionsand debates in arts and education. At Illinois, faculty and graduate students build a vibrant community of inquiry within the context of a Research 1 university. This community, including faculty whose breadth of interests span topics including contemporary art and visual culture in education, formal and informal learning, cultural policy and urban studies, and teacher training and identity, provides a richly stimulating environment for graduate students to stretch themselves as art educators and scholars.The program of study leading to the degree of Master of Arts (MA) in Art Education is designed to provide advanced level professional study for students who are interested in research in art education. It can serve as preparation for a variety of careers, such as museum education, community arts, arts advocacy, arts policy formation; professional development for art teachers and supervisors in the public schools; and as preparation for the doctoral degree.

Statement for Programs of Study Catalog

Code	Title	Hours
ARTE 402	Artistic Development	3 or 4
ARTE 502	Curriculum Development in Art	4
ARTE 505	Foundations of Art Education	4
ARTE 501	Issues in Art Education	4
or ARTE 505	Foundations of Art Education	
ARTE 593	Survey: Qualitative Methodologies	4
ARTE 591	Independent Graduate Studies	2
Electives		14+
Thesis Hours Required–ARTE 599		4
Total Hours		**32**

Other Requirements

Requirement	Description
Other requirements may overlap	
Candidates must spend at least two semesters or the equivalent in residence.	
Minimum 500-level Hours Required Overall:	12
Certification requirements, if needed:	40-44
Minimum GPA:	2.75

EP Documentation

DMI Documentation

Banner/Codebook Name

MA:Art Education -UIUC

Program Code:

10KS0169MA

Degree Code

MA

Major Code

0169

Program Reviewer Comments

Deb Forgacs (dforgacs) (Fri, 04 Sep 2020 21:22:04 GMT): Rollback: requested
Kathy Martensen (kmartens) (Tue, 20 Oct 2020 18:59:16 GMT): Admin approval: No change to total hours required/doesn't restrict course options.

Key: 29

10KS0169MA: Art Education, MA

[current]

Code	Title	Hours
ARTE 402	Artistic Development	3 or 4
ARTE 501	Issues in Art Education	4
ARTE 502	Curriculum Development in Art	4
ARTE 505	Foundations of Art Education	4
Electives		12
Thesis Hours Required–ARTE 599 (min/max applied toward degree)		4
Total Hours		**32**

[proposed]

Code	Title	Hours
ARTE 502	Curriculum Development in Art	4
ARTE 505 OR ARTE 501	Foundations of Art Education OR Issues in Art Education	4
ARTE 593	Survey: Qualitative Methodologies	4
ARTE 591	Independent Graduate Studies	2
Electives		14+
Thesis Hours Required–ARTE 599		4
Total Hours		**32**

Other Requirements[1]

Requirement	Description
Other requirements may overlap	
Candidates must spend at least two semesters or the equivalent in residence.	
Minimum 500-level Hours Required Overall:	12
Certification requirements, if needed:	40-44
Minimum GPA:	2.75
Grad Other Degree Requirements	

[1] *For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook.*

Other Requirements[1]

Requirement	Description
Other requirements may overlap	
Candidates must spend at least two semesters or the equivalent in residence.	
Minimum 500-level Hours Required Overall:	12
Certification requirements, if needed:	40-44
Minimum GPA:	2.75

GR-INFORMATICS: INFORMATICS PHD COURSE LISTS

In Workflow

1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
2. 1468 Head (kereadel@illinois.edu)
3. LP Dean (knox@illinois.edu)
4. University Librarian (jpwilkin@illinois.edu)
5. Grad_College (agrindly@illinois.edu; jch@illinois.edu; lowry@illinois.edu)
6. Provost (kmartens@illinois.edu)
7. Senate EPC (bjlehman@illinois.edu; kmartens@illinois.edu; moorhouz@illinois.edu)
8. Senate (jtempel@illinois.edu)
9. U Senate Conf (none)
10. Board of Trustees (none)
11. IBHE (none)
12. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

Approval Path

1. Fri, 16 Oct 2020 13:46:45 GMT
   Deb Forgacs (dforgacs): Approved for U Program Review
2. Fri, 16 Oct 2020 14:58:00 GMT
   Karin Readel (kereadel): Approved for 1468 Head
3. Fri, 16 Oct 2020 15:48:37 GMT
   Emily Knox (knox): Approved for LP Dean
4. Fri, 16 Oct 2020 15:53:05 GMT
   John Wilkin (jpwilkin): Approved for University Librarian
5. Tue, 27 Oct 2020 15:21:04 GMT
   Allison McKinney (agrindly): Approved for Grad_College
6. Wed, 28 Oct 2020 19:53:30 GMT
   Kathy Martensen (kmartens): Approved for Provost

History

1. Oct 5, 2019 by Mary Lowry (lowry)
2. Jun 18, 2020 by Deb Forgacs (dforgacs)

Date Submitted:Thu, 15 Oct 2020 22:21:48 GMT

Viewing:GR-Informatics : Informatics PHD Course Lists

Changes proposed by: Karin Readel

Proposal Type

Proposal Type:

Concentration (ex. Dietetics)

This proposal is for a:

Revision

Proposal Title:

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

Administrative approval: Update to required course lists, primarily due to renumbering of IS courses

EP Control Number

EP.21.020

Official Program Name

Informatics PHD Course Lists

Effective Catalog Term

Spring 2021

Sponsor College

School of Information Sciences

Sponsor Department

Informatics

Sponsor Name

Karin Readel

Sponsor Email

kereadel@illinois.edu

College Contact

Karin Readel

College Contact Email

kereadel@illinois.edu

Program Description and Justification

Justification for proposal change:

IS renumbered all of their courses resulting in errors in our required course listings. We are also adding a few IS courses to the list.
We are requesting NO changes other than updating the required course list. A complete side by side comparison of current vs. revised courses is attached. All requested changes are highlighted in yellow.

Is this program interdisciplinary?

No

Corresponding Program(s):

Corresponding Program(s)
Informatics, PhD

Academic Level

Graduate

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No impact is expected

What is the typical time to completion of this program?

6 years

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

96

Delivery Method

Is this program available on campus and online?

No

This program is available:

On Campus

Budget

Are there budgetary implications for this revision?

No

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

No

Resource Implications

Facilities

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

No

Technology

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

No

Non-Technical Resources

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

No

Resources

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

Faculty Resources

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 impact expected

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.

No impact expected

Instructional Resources

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

No

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

No

Financial Resources

How does the unit intend to financially support this proposal?

No changes

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

No

Is this program requesting self-supporting status?

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).

No changes to current assessment plan (updated in Fall 2020)

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

INFO Catalog Update FA 2020 (2).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

Statement for Programs of Study Catalog

Applications Courses (Select 2 courses at the 500 level from list below)

Code	Title	Hours
ANSC 542	Applied Bioinformatics	4
ANSC 545	Statistical Genomics	3 or 4
ARCH 423	Soc/Beh Factors for Design	3
ARTD 501	Industrial Design I	6
ARTS 443	Time Arts II	3 or 4
ARTS 444	Interaction II	3 or 4
CHBE 571	Bioinformatics	4
CHLH 527	Statistics in Epidemiology	4
CPSC 558	Quantitative Plant Breeding	4
CPSC 565	Perl & UNIX for Bioinformatics	2
CPSC 567	Bioinformatics & Systems Biol	4
CS 548	Models of Cognitive Processes	4
DANC 532	Digital Media for Dancers	2
DANC 550	Advanced Research in Dance	1 to 4
ECE 537	Speech Processing Fundamentals	4
EPSY 587	Hierarchical Linear Models	4
EPSY 589	Categorical Data Analysis in Educational Psychology	4
IE 510	Applied Nonlinear Programming	4
IE 511	Integer Programming	4
IE 512	Network Analysis of Systems	4
INFO 555	Advanced Educational Technologies for Engagement and Interactive Learning	4
LING 501	Syntax I	4
LING 502	Phonology I	4
LING 507	Formal Semantics I	4
LING 520	Acoustic Phonetics	4
IS 518	Seminar in Information Services	4
IS 506	Human-Centered Information Systems	4
IS 520	Community Informatics	4
IS 524	Data Governance	2 or 4
IS 525	Data Warehousing	4
IS 526	Building Advanced Interactive Systems	4
IS 549	Practicum	4
IS 556	Internet of Things	4
IS 557	Applied Machine Learning: Team Projects	4
IS 586	Usability Engineering	4
MUS 407	Elect Music Techniques I	3
MUS 409	Elec Music Techniques II	2
MUS 448	Computer Music	3

MUS 506	Graduate Level Composition	2 to 6
MUS 507	Sem in Music Comp and Theory	2 or 4
NUTR 511	Regulation of Metabolism	4
PATH 516	Epidemiology Infectious Dis	3
PATH 517	Principle/Method Epidemiology	4
PATH 560	Spatial Epidemiology	4
PS 530	Quant Pol Analysis I	4
PS 531	Quant Pol Analysis II	4
PSYC 509	Psych Scaling Multidimen Meth	4
THEA 419	Theatrical CAD Drafting	2
THEA 430	Technical Direction I	3
THEA 437	Software for Lighting Design	2
THEA 453	Introduction to Theatre Sound	3
THEA 454	Sound Design I	3
THEA 455	Sound Design II	3
THEA 550	Colloquium Design & Theat Tech	4 or 8
UP 519	Advanced Applications of GIS	4

Foundations Courses (Select 2 courses at the 500 level from list below)

Code	Title	Hours
CPSC 541	Regression Analysis	5
CPSC 542	Applied Statistical Methods II	5
CS 414	Multimedia Systems	3 or 4
CS 418	Interactive Computer Graphics	3 or 4
CS 419	Production Computer Graphics	3 or 4
CS 427	Software Engineering I	3 or 4
CS 438	Communication Networks	3 or 4
CS 440	Artificial Intelligence	3 or 4
CS 446	Machine Learning	3 or 4
CS 465	User Interface Design	3 or 4
CS 511	Advanced Data Management	4
CS 512	Data Mining Principles	4
CS 519	Scientific Visualization	4
CS 546	Machine Learning in NLP	4
CS 558	Topics in Numerical Analysis	4
CS 565	Human-Computer Interaction	4
CS 573	Algorithms	4
ECE 417	Multimedia Signal Processing	4
ECE 418	Image & Video Processing	4
ECE 420	Embedded DSP Laboratory	2
ECE 437	Sensors and Instrumentation	3
ECE 439	Wireless Networks	3 or 4
ECE 453	Wireless Communication Systems	4
ECE 470	Introduction to Robotics	4
ECE 473	Fund of Engrg Acoustics	3 or 4
ECE 511	Computer Architecture	4
ECE 512	Computer Microarchitecture	4
ECE 513	Vector Space Signal Processing	4
ECE 517	Nonlinear & Adaptive Control	4
ECE 537	Speech Processing Fundamentals	4
ECE 544	Topics in Signal Processing	4
ECE 547	Topics in Image Processing	4

ECE 549	Computer Vision	4
ECE 550	Advanced Robotic Planning	4
ECE 551	Digital Signal Processing II	4
ECE 558	Digital Imaging	4
ECE 580	Optimiz by Vector Space Methds	4
ECE 594	Math Models of Language	3 or 4
EPSY 580	Statistical Inference in Education	4
EPSY 581	Applied Regression Analysis	4
EPSY 582	Advanced Statistical Methods	4
EPSY 587	Hierarchical Linear Models	4
EPSY 588	Covar Struct and Factor Models	4
IS 531	Course IS 531 Not Found	4
IS 532	School Library Management	4
IS 542	Research and Inquiry for Youth	4
IS 543	Digital Preservation	4
IS 556	Internet of Things	4
IS 559	CAS Project	4
IS 561	Use and Users of Information	4
IS 562	Administration and Use of Archival Materials	4
IS 504	Sociotechnical Information Systems	4
IS 507	Data, Statistical Models and Information	4
IS 515	Information Modeling	4
IS 517	Methods of Data Science	4
IS 519	Research Design in Information Science	4
IS 527	Network Analysis	4
IS 537	Theory & Practice of Data Cleaning	4
IS 547	Foundations of Data Curation	4
IS 545	Advanced Data Visualization	4
IS 575	Metadata in Theory & Practice	4
IS 577	Data Mining	2 or 4
IS 596	Advanced Topics in Human-Centered Design & Systems (Section D: Implement Info Stor& Retr)	2 to 4
MATH 580	Combinatorial Mathematics	4
PSYC 509	Psych Scaling Multidimen Meth	4
PSYC 514	Seminar in Cognitive Science	2 or 4
PSYC 588	Covar Struct and Factor Models	4
PSYC 594	Multivar Anlys in Psych and Ed	4
STAT 510	Mathematical Statistics I	4
STAT 525	Computational Statistics	4
STAT 542	Statistical Learning	4
STAT 571	Multivariate Analysis	4
STAT 587	Hierarchical Linear Models	4

EP Documentation

DMI Documentation

Program Code:

GR-Informatics

Program Reviewer Comments

Deb Forgacs (dforgacs) (Thu, 15 Oct 2020 21:33:13 GMT): Rollback: request
Kathy Martensen (kmartens) (Wed, 28 Oct 2020 19:53:27 GMT): Admin approval: No change in total hours required/restriction on choice.

Key: 904

Comparison of Course Lists:

Applications Courses (Select 2 courses at the 500 level from list below)			
Current Requirements		**Revised Requirements**	
ANSC 542 Applied Bioinformatics	4	ANSC 542 Applied Bioinformatics	4
ANSC 545 Statistical Genomics	3 or 4	ANSC 545 Statistical Genomics	3 or 4
ARCH 423 Soc/Beh Factors for Design	3	ARCH 423 Soc/Beh Factors for Design	3
ARTD 501 Industrial Design I	6	ARTD 501 Industrial Design I	6
ARTS 443 Time Arts II	3 or 4	ARTS 443 Time Arts II	3 or 4
ARTS 444 Interaction II	3 or 4	ARTS 444 Interaction II	3 or 4
CHBE 571 Bioinformatics	4	CHBE 571 Bioinformatics	4
CHLH 527 Statistics in Epidemiology	4	CHLH 527 Statistics in Epidemiology	4
CPSC 558 Quantitative Plant Breeding	4	CPSC 558 Quantitative Plant Breeding	4
CPSC 565 Perl & Unix for Bioinformatics	2	CPSC 565 Perl & Unix for Bioinformatics	2
CPSC 567 Bioinformatics & Sys Biol	4	CPSC 567 Bioinformatics & Sys Biol	4
CS 548 Models of Cognitive Processes	4	CS 548 Models of Cognitive Processes	4
DANC 532 Digital Media for Dancers	2	DANC 532 Digital Media for Dancers	2
DANC 550 Advanced Research in Dance	1 to 4	DANC 550 Advanced Research in Dance	1 to 4
ECE 537 Speech Processing Fundamentals	4	ECE 537 Speech Processing Fundamentals	4
EPSY 587 Hierarchical Linear Models	4	EPSY 587 Hierarchical Linear Models	4
EPSY 589 Categorial Data Analysis in Educational Psychology	4	EPSY 589 Categorial Data Analysis in Educational Psychology	4
IE 510 Applied Nonlinear Programming	4	IE 510 Applied Nonlinear Programming	4
IE 511 Integer Programming	4	IE 511 Integer Programming	4
IE 512 Network Analysis of Systems	4	IE 512 Network Analysis of Systems	4

INFO 555 Advanced Educational Technologies for Engagement and Interactive Learning	4	INFO 555 Advanced Educational Technologies for Engagement and Interactive Learning	4
LING 501 Syntax I	4	LING 501 Syntax I	4
LING 502 Phonology I	4	LING 502 Phonology I	4
LING 507 Formal Semantics I	4	LING 507 Formal Semantics I	4
LING 520 Acoustic Phonetics	4	LING 520 Acoustic Phonetics	4
		IS 506 Human-Centered Information Systems	4
IS 518 Seminar in Informatics Services	4		
		IS 520 Community Informatics	4
		IS 524 Data Governance	2-4
		IS 525 Data Warehousing	4
IS 526 Building Advanced Interactive Systems	2-4	IS 526 Building Advanced Interactive Systems	4
IS 549 Practicum	4		
		IS 556 Internet of Things	4
		IS 557 Applied Machine Learning: Team Projects	4
		IS 586 Usability Engineering	4
MUS 407 Elect Music Techniques I	3	MUS 407 Elect Music Techniques I	3
MUS 409 Elect Music Techniques II	2	MUS 409 Elect Music Techniques II	2
MUS 448 Computer Music	3	MUS 448 Computer Music	3
MUS 506 Graduate Level Composition	0 to 6	MUS 506 Graduate Level Composition	2 to 6
MUS 507 Sem in Music Comp and Theory	2 or 4	MUS 507 Sem in Music Comp and Theory	2 or 4
NUTR 511 Regulation of Metabolism	4	NUTR 511 Regulation of Metabolism	4
PATH 516 Epidemiology of Infectious Dis	3	PATH 516 Epidemiology of Infectious Dis	3
PATH 517 Principle/Method Epidemiology	4	PATH 517 Principle/Method Epidemiology	4
PATH 560 Spatial Epidemiology	4	PATH 560 Spatial Epidemiology	4
PS 530 Quant Pol Analysis I	4	PS 530 Quant Pol Analysis I	4
PS 531 Quant Pol Analysis II	4	PS 531 Quant Pol Analysis II	4
PSYC 509 Psych Scaling Multidimen Meth	4	PSYC 509 Psych Scaling Multidimen Meth	4
THEA 419 Theatrical CAD Drafting	3	THEA 419 Theatrical CAD Drafting	2

THEA 430 Technical Direction I	3	THEA 430 Technical Direction I	3
THEA 437 Software for Lighting Design	2	THEA 437 Software for Lighting Design	2
THEA 453 Introduction to Theatre Sound	3	THEA 453 Introduction to Theatre Sound	3
THEA 454 Sound Design I	3	THEA 454 Sound Design I	3
THEA 455 Sound Design II	3	THEA 455 Sound Design II	3
THEA 550 Colloquium Design & Theat Tech	4 or 8	THEA 550 Colloquium Design & Theat Tech	4 or 8
UP 519 Advanced Applications of GIS	4	UP 519 Advanced Applications of GIS	4
Foundations Courses (Select 2 courses at the 500 level from list below)			
Current Requirements		**Revised Requirements**	
CPSC 541 Regression Analysis	5	CPSC 541 Regression Analysis	5
CPSC 542 Applied Statistical Methods II	5	CPSC 542 Applied Statistical Methods II	5
CS 414 Multimedia Systems	3 or 4	CS 414 Multimedia Systems	3 or 4
CS 418 Interactive Computer Graphics	3 or 4	CS 418 Interactive Computer Graphics	3 or 4
CS 419Production Computer Graphics	3 or 4	CS 419Production Computer Graphics	3 or 4
CS 427 Software Engineering I	3 or 4	CS 427 Software Engineering I	3 or 4
CS 438 Communications Networks	3 or 4	CS 438 Communications Networks	3 or 4
CS 440 Artificial Intelligence	3 or 4	CS 440 Artificial Intelligence	3 or 4
CS 446 Machine Learning	3 or 4	CS 446 Machine Learning	3 or 4
CS 465 User Interface Design	3 or 4	CS 465 User Interface Design	3 or 4
CS 511 Advanced Data Management	4	CS 511 Advanced Data Management	4
CS 512 Data Mining Principles	4	CS 512 Data Mining Principles	4
CS 519 Scientific Visualization	4	CS 519 Scientific Visualization	4
CS 546 Machine Learning in NLP	4	CS 546 Machine Learning in NLP	4
CS 558 Topics in Numerical Analysis	4	CS 558 Topics in Numerical Analysis	4
CS 565 Human-Computer Interaction	4	CS 565 Human-Computer Interaction	4

CS 573 Algorithms	4	CS 573 Algorithms	4
ECE 417 Multimedia Signal Processing	4	ECE 417 Multimedia Signal Processing	4
ECE 418 Image & Video Processing	4	ECE 418 Image & Video Processing	4
ECE 420 Embedded DSP Laboratory	2	ECE 420 Embedded DSP Laboratory	2
ECE 437 Sensors and Instrumentation	3	ECE 437 Sensors and Instrumentation	3
ECE 439 Wireless Networks	3 or 4	ECE 439 Wireless Networks	3 or 4
ECE 453 Wireless Communication Systems	4	ECE 453 Wireless Communication Systems	4
ECE 470 Introduction to Robotics	4	ECE 470 Introduction to Robotics	4
ECE 473 Fund of Engrg Acoustics	3 or 4	ECE 473 Fund of Engrg Acoustics	3 or 4
ECE 511 Computer Architecture	4	ECE 511 Computer Architecture	4
ECE 512 Computer Microarchitecture	4	ECE 512 Computer Microarchitecture	4
ECE 513 Vector Space Signal Processing	4	ECE 513 Vector Space Signal Processing	4
ECE 517 Nonlinear & Adaptive Control	4	ECE 517 Nonlinear & Adaptive Control	4
ECE 537 Speech Processing Fundamentals	4	ECE 537 Speech Processing Fundamentals	4
ECE 544 Topics in Signal Processing	4	ECE 544 Topics in Signal Processing	4
ECE 547Topics in Image Processing	4	ECE 547Topics in Image Processing	4
ECE 549 Computer Vision	4	ECE 549 Computer Vision	4
ECE 550 Advanced Robotic Planning	4	ECE 550 Advanced Robotic Planning	4
ECE 551Digital Signal Processing II	4	ECE 551Digital Signal Processing II	4
ECE 558 Digital Imaging	4	ECE 558 Digital Imaging	4
ECE 580 Optimiz by Vector Space Methds	4	ECE 580 Optimiz by Vector Space Methds	4
ECE 594 Math Models of Language	3 or 4	ECE 594 Math Models of Language	3 or 4
EPSY 580 Statistical Inference in Education	4	EPSY 580 Statistical Inference in Education	4
EPSY 581 Applied Regression Analysis	4	EPSY 581 Applied Regression Analysis	4

EPSY 582 Advanced Statistical Methods	4	EPSY 582 Advanced Statistical Methods	4
EPSY 587Hierarchical Linear Models	4	EPSY 587Hierarchical Linear Models	4
EPSY 588 Covar Struct and Factor Models	4	EPSY 588 Covar Struct and Factor Models	4
		IS 504 Sociotechnical Information Systems	4
		IS 507 Data, Statistical Models and Information	4
		IS 515 Information Modeling	4
		IS 517 Methods of Data Science	4
		IS 519 Research Design in Information Science	4
		IS 527 Network Analysis	4
IS 531 Course not found			
		IS 537 Theory & Practice of Data Cleaning	4
		IS 547 Foundations of Data Curation	4
IS 532 School Library Management	4		
IS 542 Research & Inquiry for Youth	4		
IS 543 Digital Preservation	4		
		IS 545 Advanced Data Visualization	4
IS 556 Internet of Things	4		
IS 559 CAS Project	4		
IS 561 Use and users of Information	4		
IS 562 Administration and Use of Archival Materials	4		
		IS 575 Meta Data in Theory & Practice	4
		IS 577 Data Mining	4
		IS 596D Implement Info Stor & Retr	4
MATH 580 Combinatorial Mathematics	4	MATH 580 Combinatorial Mathematics	4
PSYC 509 Psych Scaling Multidem Meth	4	PSYC 509 Psych Scaling Multidem Meth	4

PSYC 514 Seminar in Cognitive Science	2 or 4	PSYC 514 Seminar in Cognitive Science	2 or 4
PSYC 588 Covar Struct and Factor Models	4	PSYC 588 Covar Struct and Factor Models	4
PSYC 594 Multivar Anlys in Psych and Ed	4	PSYC 594 Multivar Anlys in Psych and Ed	4
STAT 510 Mathematical Statistics I	4	STAT 510 Mathematical Statistics I	4
STAT 525 Computational Statistics	4	STAT 525 Computational Statistics	4
STAT 542 Statistical Learning	4	STAT 542 Statistical Learning	4
STAT 571 Multivariate Analysis	4	STAT 571 Multivariate Analysis	4
STAT 587 Hierarchical Linear Models	4	STAT 587 Hierarchical Linear Models	4

4026:MS: BIOINFORMATICS, MS

In Workflow

1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
2. 1468 Head (kereadel@illinois.edu)
3. LM Dean (kmartens@illinois.edu)
4. University Librarian (jpwilkin@illinois.edu)
5. Grad_College (agrindly@illinois.edu; jch@illinois.edu; lowry@illinois.edu)
6. Provost (kmartens@illinois.edu)
7. Senate EPC (bjlehman@illinois.edu; kmartens@illinois.edu; moorhouz@illinois.edu)
8. Senate (jtempel@illinois.edu)
9. U Senate Conf (none)
10. Board of Trustees (none)
11. IBHE (none)
12. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

Approval Path

1. Thu, 22 Oct 2020 19:27:54 GMT
   Deb Forgacs (dforgacs): Approved for U Program Review
2. Thu, 22 Oct 2020 19:28:11 GMT
   Karin Readel (kereadel): Approved for 1468 Head
3. Thu, 22 Oct 2020 19:40:29 GMT
   Kathy Martensen (kmartens): Approved for LM Dean
4. Thu, 22 Oct 2020 19:45:05 GMT
   John Wilkin (jpwilkin): Approved for University Librarian
5. Tue, 27 Oct 2020 15:21:01 GMT
   Allison McKinney (agrindly): Approved for Grad_College
6. Wed, 28 Oct 2020 19:56:39 GMT
   Kathy Martensen (kmartens): Approved for Provost

History

1. Sep 4, 2019 by Mary Lowry (lowry)
2. Sep 4, 2019 by Mary Lowry (lowry)
3. Feb 7, 2020 by Deb Forgacs (dforgacs)

Date Submitted:Thu, 22 Oct 2020 19:27:35 GMT

Viewing:4026:MS : Bioinformatics, MS

Changes proposed by: Karin Readel

Proposal Type

Proposal Type:

Major (ex. Special Education)

This proposal is for a:

Revision

Proposal Title:

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

Administrative approval: Revision for IS 542 course change.

EP Control Number

EP.21.020

Official Program Name

Bioinformatics, MS

Effective Catalog Term

Spring 2021

Sponsor College

Provost Academic Programs

Sponsor Department

Informatics

Sponsor Name

Karin Readel

Sponsor Email

kereadel@illinois.edu

College Contact

Karin Readel

College Contact Email

kereadel@illinois.edu

Program Description and Justification

Justification for proposal change:

this update is needed due to the iSchool renumbering their courses.

Corresponding Degree

MS Master of Science

Is this program interdisciplinary?

No

Academic Level

Graduate

Will you admit to the concentration directly?

No

Is a concentration required for graduation?

No

CIP Code

261103 - Bioinformatics.

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Admission Requirements

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

No

Enrollment

Describe how this revision will impact enrollment and degrees awarded.

N/A

Estimated Annual Number of Degrees Awarded

Year One Estimate

migration

5th Year Estimate (or when fully implemented)

migration

What is the matriculation term for this program?

Fall

What is the typical time to completion of this program?

2 years

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

32 hours

Delivery Method

Is this program available on campus and online?

No

This program is available:

On Campus

Budget

Are there budgetary implications for this revision?

No

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

No

Resource Implications

Facilities

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

No

Technology

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

No

Non-Technical Resources

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

No

Resources

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

Faculty Resources

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.

N/A

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

Instructional Resources

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

No

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

No

Financial Resources

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

No

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

Yes

Is this program requesting self-supporting status?

No

Program Regulation and Assessment

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).

Covered by each department/concentration.

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.

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

Catalog Page Text

Statement for Programs of Study Catalog

Thesis or Non Thesis Option

Code	Title	Hours
Computer Science and Informatics (choose one)		4
CS 411	Database Systems	
CS 466	Introduction to Bioinformatics	
CS 473	Algorithms	
CPSC 565	Perl & UNIX for Bioinformatics	
IS 455	Database Design and Prototyping	
IS 542	Research and Inquiry for Youth	
IS 507	Data, Statistical Models and Information	
STAT 428	Statistical Computing	
STAT 440	Statistical Data Management	

STAT 448	Advanced Data Analysis	
STAT 480	Data Science Foundations	
STAT 525	Computational Statistics	
Fundamental Bioinformatics (choose one)		4
ANSC 542	Applied Bioinformatics	
ANSC 545	Statistical Genomics	
CHBE 571	Bioinformatics	
CPSC 567	Bioinformatics & Systems Biol	
CS 466	Introduction to Bioinformatics	
IB 467	Principles of Systematics	
MCB 432	Computing in Molecular Biology	
Biology (choose one)		4
ANSC 441	Human Genetics	
ANSC 444	Applied Animal Genetics	
ANSC 446	Population Genetics	
BIOP 401	Introduction to Biophysics	
BIOP 550	Biomolecular Physics	
CPSC 452	Advanced Plant Genetics	
CPSC 466	Genomics for Plant Improvement	
CPSC 563	Chromosomes	
CPSC 564	Molecular Marker Data Analyses	
CPSC 566	Plant Gene Regulation	
MCB 400	Cancer Cell Biology	
MCB 450	Introductory Biochemistry	
MCB 501	Advanced Biochemistry	
MCB 502	Advanced Molecular Genetics	
Additionally for Thesis Option:		**4-8**
Thesis Hours Required	4-8 hours	
Total Hours		**32 or 36**

Other Requirements

Requirement	Description
Other requirements may overlap	
A concentration is required.	
Minimum Hours Required Within the Unit:	8
Minimum 500-level Hours Required Overall:	12

EP Documentation

DMI Documentation

Banner/Codebook Name

Bioinformatics, MS

Program Code:

4026:MS

Degree Code

MS

Major Code

4026

Program Reviewer Comments

Kathy Martensen (kmartens) (Wed, 28 Oct 2020 19:56:35 GMT): Admin approval: No change in total hours required/does not restrict range of options.

Key: 583

10KS5100MS: BIOINFORMATICS: CROP SCIENCE, MS

In Workflow

1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
2. 1802 Committee Chair (arayburn@illinois.edu)
3. 1802 Head (asdavis1@illinois.edu)
4. KL Committee Chair (bjgray2@illinois.edu)
5. KL Dean (aball@illinois.edu)
6. University Librarian (jpwilkin@illinois.edu)
7. Grad_College (agrindly@illinois.edu; jch@illinois.edu; lowry@illinois.edu)
8. Provost (kmartens@illinois.edu)
9. Senate EPC (bjlehman@illinois.edu; kmartens@illinois.edu; moorhouz@illinois.edu)
10. Senate (jtempel@illinois.edu)
11. U Senate Conf (none)
12. Board of Trustees (none)
13. IBHE (none)
14. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

Approval Path

1. Wed, 21 Oct 2020 22:04:18 GMT
   Deb Forgacs (dforgacs): Approved for U Program Review
2. Sat, 24 Oct 2020 16:11:28 GMT
   Lane Rayburn (arayburn): Approved for 1802 Committee Chair
3. Sun, 25 Oct 2020 00:00:07 GMT
   Adam Davis (asdavis1): Approved for 1802 Head
4. Mon, 26 Oct 2020 19:50:54 GMT
   Brianna Gregg (bjgray2): Approved for KL Committee Chair
5. Mon, 26 Oct 2020 22:53:09 GMT
   Anna Ball (aball): Approved for KL Dean
6. Mon, 26 Oct 2020 23:53:15 GMT
   John Wilkin (jpwilkin): Approved for University Librarian
7. Tue, 27 Oct 2020 18:13:53 GMT
   Allison McKinney (agrindly): Approved for Grad_College
8. Wed, 28 Oct 2020 19:58:54 GMT
   Kathy Martensen (kmartens): Approved for Provost

History

1. Sep 4, 2019 by Mary Lowry (lowry)
2. Sep 6, 2019 by Mary Lowry (lowry)

Date Submitted:Mon, 19 Oct 2020 17:34:55 GMT

Viewing:10KS5100MS : Bioinformatics: Crop Science, MS

Changes proposed by: Scott Bartlett

Proposal Type

Proposal Type:

Concentration (ex. Dietetics)

This proposal is for a:

Revision

Proposal Title:

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

Administrative approval: Course Change Revision.

EP Control Number

EP.21.020

Official Program Name

Bioinformatics: Crop Science, MS

Effective Catalog Term

Spring 2021

Sponsor College

Agr, Consumer, & Env Sciences

Sponsor Department

Crop Sciences

Sponsor Name

Nathan Schroeder

Sponsor Email

nes@illinois.edu

College Contact

Brianna Gregg

College Contact Email

bjgray2@illinois.edu

Program Description and Justification

Justification for proposal change:

IS 542 needs to be switched to IS 507. It used to be IS 542, but has now been renumbered (per Karin Readel in Informatics).

Is this program interdisciplinary?

No

Corresponding Program(s):

Corresponding Program(s)
Bioinformatics, MS

Academic Level

Graduate

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No impact.

What is the typical time to completion of this program?

2 years

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

32 (Thesis), 36 (Non-Thesis)

Delivery Method

Is this program available on campus and online?

No

This program is available:

On Campus

Budget

Are there budgetary implications for this revision?

No

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

No

Resource Implications

Facilities

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

No

Technology

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

No

Non-Technical Resources

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

No

Resources

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

Faculty Resources

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.

None

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.

None

Instructional Resources

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

No

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

No

Financial Resources

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

No

Is this program requesting self-supporting status?

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).

N/A

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

ep1728-final.pdf

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

Catalog Page Text

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

EP.17.28 attached

Statement for Programs of Study Catalog

Thesis Option

Code	Title	Hours
Biology (choose one)		4
ANSC 441	Human Genetics	
ANSC 444	Applied Animal Genetics	
ANSC 446	Population Genetics	
BIOP 401	Introduction to Biophysics	
BIOP 550	Biomolecular Physics	
CPSC 452	Advanced Plant Genetics	
CPSC 466	Genomics for Plant Improvement	
CPSC 563	Chromosomes	
CPSC 564	Molecular Marker Data Analyses	
CPSC 566	Plant Gene Regulation	
MCB 400	Cancer Cell Biology	
MCB 450	Introductory Biochemistry	
MCB 501	Advanced Biochemistry	
MCB 502	Advanced Molecular Genetics	
Fundamental Bioinformatics (choose one)		4
ANSC 542	Applied Bioinformatics	
ANSC 545	Statistical Genomics	
CHBE 571	Bioinformatics	
CPSC 567	Bioinformatics & Systems Biol	
CS 466	Introduction to Bioinformatics	
IB 467	Principles of Systematics	
MCB 432	Computing in Molecular Biology	
Computer Science and Informatics (choose one)		4
CS 411	Database Systems	
CS 466	Introduction to Bioinformatics	
CS 473	Algorithms	
CPSC 565	Perl & UNIX for Bioinformatics	
IS 455	Database Design and Prototyping	
IS 542	Research and Inquiry for Youth	

IS 507	Data, Statistical Models and Information	
STAT 428	Statistical Computing	
STAT 440	Statistical Data Management	
STAT 448	Advanced Data Analysis	
STAT 480	Data Science Foundations	
STAT 525	Computational Statistics	
Seminar (1 per semester)		
Electives		16
CPSC 599	Thesis Research	4
or PLPA 599	Thesis Research	
Total Hours		**32**

Other Requirements

Code	Title	Hours
Other requirements and conditions may overlap		
A concentration is required		
Minimum Hours Required Within the Unit:		5
Minimum 500-level Hours Required overall:		12
Minimum GPA:		3.0

Non-Thesis Option

Code	Title	Hours
Biology (choose one)		4
ANSC 441	Human Genetics	
ANSC 444	Applied Animal Genetics	
ANSC 446	Population Genetics	
BIOP 401	Introduction to Biophysics	
BIOP 550	Biomolecular Physics	
CPSC 452	Advanced Plant Genetics	
CPSC 466	Genomics for Plant Improvement	
CPSC 563	Chromosomes	
CPSC 564	Molecular Marker Data Analyses	
CPSC 566	Plant Gene Regulation	
MCB 400	Cancer Cell Biology	
MCB 450	Introductory Biochemistry	
MCB 501	Advanced Biochemistry	
MCB 502	Advanced Molecular Genetics	
Fundamental Bioinformatics (choose one)		4
ANSC 542	Applied Bioinformatics	
ANSC 545	Statistical Genomics	
CHBE 571	Bioinformatics	
CPSC 567	Bioinformatics & Systems Biol	
CS 466	Introduction to Bioinformatics	
IB 467	Principles of Systematics	
MCB 432	Computing in Molecular Biology	
Computer Science and Informatics (choose one)		4
CS 411	Database Systems	
CS 466	Introduction to Bioinformatics	
CS 473	Algorithms	
CPSC 565	Perl & UNIX for Bioinformatics	
IS 455	Database Design and Prototyping	
IS 542	Research and Inquiry for Youth	
IS 507	Data, Statistical Models and Information	

STAT 428	Statistical Computing	
STAT 440	Statistical Data Management	
STAT 448	Advanced Data Analysis	
STAT 480	Data Science Foundations	
STAT 525	Computational Statistics	
Seminar (1 per semester)		
Electives		24
Total Hours		**36**

Other Requirements

Code	Title	Hours
Other requirements and conditions may overlap		
A concentration is required		
Minimum Hours Required Within the Unit:		5
Minimum 500-level Hours Required overall:		12
Minimum GPA:		3.0

EP Documentation

DMI Documentation

Banner/Codebook Name

MS: Bioinformatics: CropS-UIUC

Program Code:

10KS5100MS

Conc Code

5100

Degree Code

MS

Major Code

4026

Program Reviewer Comments

Kathy Martensen (kmartens) (Wed, 28 Oct 2020 19:58:27 GMT): Admin approval: Does not change total hours required or restrict range of choices.

Key: 615

ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Proposal to the Senate Educational Policy Committee

PROPOSAL TITLE: Revision the Core Curriculum of the Campus-Wide Master of Science (M.S.) in Bioinformatics Program.

SPONSOR: Gustavo Caetano-Anollés, Professor of Bioinformatics; Chair, M.S. in Bioinformatics Steering Committee, Illinois Informatics Institute; 333-8172, gca@illinois.edu

COLLEGE CONTACT: Allison McKinney, Director, Academic Programs, Policy and Academic Services, Graduate College, 333-0035, agrindley@illinois.edu ; Karin Readel, Education Coordinator, Illinois Informatics Institute, 244-1220, kereadel@illinois.edu

BRIEF DESCRIPTION:

We are requesting a curriculum revision of the major core course requirement of the campus-wide M.S. in Bioinformatics program. The core demands fulfillment of four (4) hours of coursework in each of three core areas of the broad field of bioinformatics: (i) bioinformatics, (ii) biology, and (iii) computer science. The five accepted operating concentration options of the M.S. program currently contribute coursework in these three core areas (Appendix A). However, only two courses currently satisfy the needs of the computer science area, CS 411 Database systems and CS 473 Fundamental Algorithms. Here we are requesting inclusion of additional courses to this core area, which we are relabeling 'computer science and informatics', to satisfy current academic demands in bioinformatics. We are also updating course titles and removing courses that have been discontinued. Except for these changes, the number of hours required have not been changed.

JUSTIFICATION:

The M.S. in Bioinformatics Steering Committee has identified the need to alleviate important shortcomings of the computer science core area of the program. First, seat reservations in the only two courses currently listed in this area are often unavailable to the students of the five different campus-wide options being offered. Both of these computer science courses are very popular and students complain about gaining access to them. Second, bioinformatics has expanded substatially on campus, including new initiatives on 'big data', new bioinformatic research programs across campus, substantive increases in computational resources (e.g. Blue Waters, Xsede) available for teaching, and

expanding initiatives in medical informatics. This diversity of interests and resources is not reflected in the computer science core area of instruction of this program, which only stresses databases and algorithms. The additional courses will enhance the diversity of offerings in this core area of study.

The area of bioinformatics is changing at very fast pace, incorporating fields that were not originally sought when designing this program almost a decade and a half ago (Sahinidis et al. 2005), including molecular dynamics, medical informatics, integrative data mining, and synthetic biology, to name just a few. Many students pursuing thesis research across campus under the M.S. in Bioinformatics program often inquire about the possible substitution of courses with a goal of strengthening their learning experience and matching coursework with their individual research program. At present, this is not possible. We are requesting a mechanism that would allow the M.S. in Bioinformatics Steering Committee to evaluate these substitution requests, case-by-case, and the possible inclusion of additional courses in the program's core course requirement. Recommendations made by the Steering Committee would only require approval from Graduate College before their implementation.

This mechanism was already anticipated in the umbrella proposal that jumpstarted this campus-wide program: *"As the discipline of bioinformatics is rapidly evolving and diverse, degree options offered by other units may involve different requirements in terms of numbers of units, thesis options, practical training, and design or research experiences. The common requirements for all options are that they: (a) satisfy the minimal Graduate College requirements for M.S. degrees; (b) include an acceptable number and type of the required bioinformatics core courses; (c) include requirements for a thesis or research experience on a bioinformatics topic performed under the direction of a faculty member affiliated with the bioinformatics program; and (d) be approved by the Steering Committee and the Graduate College as described in the umbrella proposal. The latter requirement will ensure a common core, maintain program quality, and avoid duplication among options."*

The goal of this request fulfills the need to maintain quality education in a highly dynamic field.

Sahinidis NV, Harandi MT, Heath MT, Murphy L, Snor M, Wheeler RP, Zukoski CF (2005) Establishing a master's degree programme in Bioinformatics: challenges and opportunities. *IEEE Proc. Syst. Biol.* 152 (4), 269-275.

BUDGETARY AND STAFF IMPLICATIONS: *(Please respond to each of the following questions.)*

1) Resources
    a. How does the unit intend to financially support this proposal?

The additional suggested courses are currently part of the elective body of courses. The inclusion of those courses in the computer science core will not represent a financial burden.

b. How will the unit create capacity or surplus to appropriately resource this program? If applicable, what functions or programs will the unit no longer support to create capacity?

   Not applicable.

c. Will the unit need to seek campus or other external resources? If so, please provide a summary of the sources and an indication of the approved support.

   No investment of resources is needed.

d. Please provide a letter of acknowledgment from the college that outlines the financial arrangements for the proposed program.

   None provided since the change does not have financial implications to the program.

2) Resource Implications

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

      Not applicable.

   b. Please address the impact on course enrollment in other units and provide an explanation of discussions with representatives of those units.

      Not applicable.

   c. Please address the impact on the University Library

      Not applicable

   d. Please address the impact on technology and space (e.g. computer use, laboratory use, equipment, etc.)

      Not applicable.

DESIRED EFFECTIVE DATE: January 1, 2017

STATEMENT FOR PROGRAMS OF STUDY CATALOG:

Master of Science in Bioinformatics

The M.S. degree can be taken in a thesis or non-thesis format, depending on the department. For either format, the research adviser must be affiliated with the Bioinformatics program. Departments may have requirements in addition to those below. See the departmental entries in this Program of Study for more information.

Thesis Option

4 hours of coursework from the approved list of biology courses	4
4 hours of coursework from the approved list of bioinformatics courses	4
4 hours of coursework from the approved list of computer science courses	4
Thesis hours required (min/max applied towards degree):	4-8
Total Hours	**32 or 36**

Other Requirements[1]

Minimum Hours Required Within the Unit:	8
Minimum 500-level Hours Required Overall:	12

A concentration is required

Non-Thesis Option

4 hours of coursework from the approved list of biology courses	4
4 hours of coursework from the approved list of bioinformatics courses	4
4 hours of coursework from the approved list of computer science courses	4
Total Hours	**32**

Other Requirements[1]

Other requirements may overlap

A concentration is required

Minimum Hours Required Within the Unit:	8
Minimum 500-level Hours Required Overall:	12

[1]For additional details and requirements refer to the degree requirements, the appropriate department's graduate handbook, and the Graduate College Handbook.

CLEARANCES: *(Clearances should include signatures and dates of approval.* ***These signatures must appear on a separate sheet.*** *If multiple departments or colleges are sponsoring the proposal, please add the appropriate signature lines below.)*

Appendix A: Proposed Curriculum Revisions

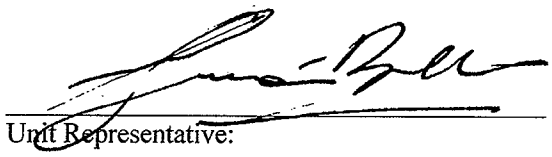
Current Requirements:	Current Hours	Revised Requirements:	Revised Hours
Major Core Requirement		***Major Core Requirement***	
Fundamental Bioinformatics		***Fundamental Bioinformatics***	
ANSC 591 – Bioinformatics*	2	(no longer offered)	
CHE 515 – Bioinformatics*	4	(no longer offered)	
MCB 440 – Computing in Molecular Biology*	3	MCB 432 Computing in Molecular Biology	3
ANSC 542 – Applied Bioinformatics (cross-listed CPSC 569 and IB 506)	4	ANSC 542 – Applied Bioinformatics (cross-listed CPSC 569 and IB 506)	4
ANSC 545 – Statistical Genomics (cross-listed IB 507)	3-4	ANSC 545 – Statistical Genomics (cross-listed CPSC 545, IB 507)	3-4
CHBE 571 – Bioinformatics (cross-listed ANSC 543, MCB 571, STAT 530)	4	CHBE 571 – Bioinformatics (cross-listed ANSC 543, MCB 571, STAT 530)	4
CPSC 567 – Bioinformatics and Systems Biology	4	CPSC 567 – Bioinformatics and Systems Biology	4
CS 466 Introduction to Bioinformatics	3-4	CS 466 Introduction to Bioinformatics	3-4
IB 467 Principles in Systematics	4	IB 467 Principles in Systematics	4
CHEM 574 – Genomics, Proteomics and Bioinformatics (cross-linked MCB 554)	4	(no longer offered)	
		†	
Biology		***Biology***	
CSB 401 – Cell Biology II*	4	(no longer offered)	
BIOCH 452 – General Biochemistry*	4	(no longer offered)	
BIOCH 453 – General Biochemistry*	4	(no longer offered)	
ANSC 441– Human Genetics (cross-listed ANTH 441)	3-4	ANSC 441– Human Genetics (cross-listed ANTH 441)	3-4
ANSC 444 – Applied Animal Genetics	3	ANSC 444 – Applied Animal Genetics	3
ANSC 446 – Population Genetics	3-4	ANSC 446 – Population Genetics (cross-listed IB 416)	3-4
ANSC 447 – Quantitative Genetics	3-4	(no longer offered)	
BIOP 401– Introduction to Biophysics (cross-listed PHYS 475)	3-4	BIOP 401– Introduction to Biophysics (cross-listed PHYS 475)	3-4
BIOP 420 – Molecular Biophysics	3-4	BIOP 550 Biomolecular Physics (cross-listed MCB 550, PHYS 550)	4
CPSC 452 Evolutionary Genetics and Genomics	3	CPSC 452 Evolutionary Genetics and Genomics	3

		CPSC 566 Genomics for Plant Improvement	2
CPSC 563 Chromosomes	3	CPSC 563 Chromosomes	3
CPSC 564 Molecular Marker Data Analyses	3	CPSC 564 Molecular Marker Data Analyses	3
CPSC 566 Plant Gene Regulation	4	CPSC 566 Plant Gene Regulation (cross-listed HORT 566)	4
MCB 400 Cancer Cell Biology	3	MCB 400 Cancer Cell Biology	3
MCB 450 Introductory Biochemistry	3	MCB 450 Introductory Biochemistry	3
MCB 501 Advanced Biochemistry	4	MCB 501 Advanced Biochemistry	4
MCB 502 Advanced Molecular Genetics	4	MCB 502 Advanced Molecular Genetics	4
		†	
Computer Science		***Computer Science and Informatics***	
CS 411 – Database Systems*	3-4	CS 411 – Database Systems	3-4
CS 473 – Combinatorial Algorithms*	3-4	CS 473 – Fundamental Algorithms (cross-listed CSE 414, MATH 473)	3-4
		CS 466 – Machine Learning	3-4
		CPSC 565 – Perl and UNIX for bioinformatics	2
		LIS 490 section DB– Introduction to databases	4
		LIS 542 – Data, statistics, info	4
		STAT 428 – Statistical computing (cross-listed CSE 428)	4
		STAT 440 – Statistical data management (cross-listed CSE 440)	4
		STAT 448– Advanced data analysis	4
		STAT 480 – Data science foundations	4
		STAT 525 – Computational Statistics (cross-listed CSE 525)	4
		†	
Total Core Required Hours	12	**Total Core Required Hours**	12
Elective and Other Requirement	20-24	***Elective and Other Requirement***	20-24

* Courses listed in the original M.S. in Bioinformatics proposal (2004), which included only two options: (i) Computer Science, and (ii) Chemical and Biomolecular Engineering. The program currently includes 5 options provided by 5 academic units.
† When circumstances outside the student's control prevent a student from attending one or more of the prescribed Core courses, the student can petition an exchange to the unit's representative to the campus M.S. in Bioinformatics umbrella program. The M.S. in Bioinformatics unit representative can authorize substitution with other course or courses of comparable level, breadth and depth.

CLEARANCES: *(Clearances should include signatures and dates of approval.* ***These signatures must appear on a separate sheet.*** *If multiple departments or colleges are sponsoring the proposal, please add the appropriate signature lines below.)*

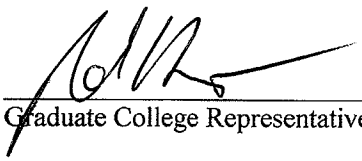
Signatures:



Unit Representative: 05/20/16 Date:

Laurie Kramer

College Representative: 5-24-16 Date:



Graduate College Representative: 10/24/16 Date:

Council on Teacher Education Representative: Date:

From:	McKinney, Allison Ann
To:	Martensen, Kathy
Cc:	Readel, Karin
Subject:	Grad Proposal - MS Bioinformatics
Date:	Tuesday, October 25, 2016 2:58:46 PM
Attachments:	Bioinformatics Revision FA16.pdf

Dear Kathy,

Please see attached for a proposal from the Illinois Informatics Institute which seeks to "Revise the Core Curriculum of the Campus-Wide MS Program". The Graduate College received the proposal on August 2, 2016. It was reviewed and approved without revision by the Graduate College Executive Committee on October 18, 2016.

We now forward the proposal for your review.

Sincerely,

Allison McKinney
Director
Academic Programs, Policy and Academic Services
Graduate College

Office of the Provost and Vice Chancellor
for Academic Affairs

Swanlund Administration Building
601 East John Street
Champaign, IL 61820

October 26, 2016

Bettina Francis, Chair
Senate Committee on Educational Policy
Office of the Senate
228 English Building, MC-461

Dear Professor Francis:

Enclosed is a copy of a proposal from the Graduate College and the Illinois Informatics Institute to revise the Master of Science in Bioinformatics.

Sincerely,

Kathryn A. Martensen
Assistant Provost

Enclosures

c: A. McKinney
K. Readel