

New Proposal

Date Submitted: 01/18/19 4:33 pm

Viewing: : **Finance: Data Analytics in Finance, MS**

Last edit: 10/07/19 10:21 am

Changes proposed by: Dustin Janes

In Workflow

1. **U Program Review**
2. **1260 Committee Chair**
3. **1260 Head**
4. **KM Grad Committee Chair**
5. **KM Dean**
6. **University Librarian**
7. **Grad_College**
8. **Provost**
9. **Senate EPC**
10. Senate
11. U Senate Conf
12. Board of Trustees
13. IBHE
14. DMI
15. Registrar

Approval Path

1. 01/18/19 5:01 pm
Kathy Martensen (kmartens):
Approved for U Program Review
2. 01/18/19 5:08 pm
George Pennacchi (gpennacc):
Approved for 1260 Committee Chair
3. 01/29/19 12:31 pm
Louis Chan (l-
chan2): Approved for 1260 Head
4. 02/06/19 11:14 am
Jeffrey Loewenstein (jloew): Approved

- for KM Grad
Committee Chair
5. 02/11/19 3:31 pm
Aric Rindfleisch
(aric): Approved
for KM Committee
Chair
 6. 02/12/19 5:29 pm
Mark Peecher
(peecher):
Approved for KM
Dean
 7. 02/12/19 7:47 pm
John Wilkin
(jpwilkin):
Approved for
University
Librarian
 8. 03/05/19 2:19 pm
Allison McKinney
(agrindly):
Rollback to KM
Dean for
Grad_College
 9. 03/06/19 1:45 pm
Mark Peecher
(peecher):
Approved for KM
Dean
 10. 03/06/19 2:09 pm
John Wilkin
(jpwilkin):
Approved for
University
Librarian
 11. 04/02/19 10:04
am
Allison McKinney
(agrindly):
Approved for
Grad_College
 12. 04/02/19 11:20
am
Kathy Martensen
(kmartens):

- Approved for
Provost
13. 04/05/19 11:07
am
Kathy Martensen
(kmartens):
Rollback to
Provost for U
Senate Conf
14. 04/09/19 9:07 am
Kathy Martensen
(kmartens):
Approved for
Provost
15. 10/03/19 4:12 pm
Kathy Martensen
(kmartens):
Rollback to 1260
Committee Chair
for Senate EPC
16. 10/04/19 2:36 pm
George Pennacchi
(gpennacc):
Approved for 1260
Committee Chair
17. 10/04/19 5:13 pm
Louis Chan (l-
chan2): Approved
for 1260 Head
18. 10/07/19 10:38
am
Jeffrey
Loewenstein
(jloew): Approved
for KM Grad
Committee Chair
19. 10/08/19 2:39 pm
Mark Peecher
(peecher):
Approved for KM
Dean
20. 10/08/19 7:47 pm
John Wilkin
(jpwilkin):
Approved for

University

Librarian

21. 10/17/19 2:14 pm

Allison McKinney

(agrindly):

Approved for

Grad_College

22. 10/17/19 2:30 pm

Kathy Martensen

(kmartens):

Approved for

Provost

Proposal Type

Proposal Type:

Concentration (ex. Dietetics)

Proposal Title

Establish a new graduate-level concentration titled "Data Analytics in Finance" in the Department of Finance in the Gies College of Business

Official Program Name Finance: Data Analytics in Finance, MS

Banner/Codebook Name

Program Code:

Major Code	Minor Code	Conc Code	Degree Code
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EP Control Number EP.20.04

Senate Approval Date

Senate Conference Approval Date

BOT Approval Date

IBHE Approval Date

Effective Date:

Effective Catalog Term Spring 2020

Sponsor College Gies College of Business

Sponsor Department Finance

Sponsor Name Martin Widdicks; Louis Chan Sponsor Email
widdicks@illinois.edu; l-
chan2@illinois.edu

College Contact Jeff Brown, Dean, College of Business c/o College Contact
Mary Schultz and Allison McKinney, Email
Director, Academic Programs & Policy in
the Graduate College

mlschltz@illinois.edu;
agrindly@illinois.edu

Is this program interdisciplinary?

No

Corresponding

Program(s):

Corresponding Program(s)
Finance, MS
Financial Engineering, MS

Academic Level Graduate

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

MSF

The concentration makes no change to the program of study (POS) for MSF as the MSF degree has a large number of elective credits built in. Of the 40 credit hours, there are 24 credit hours of electives. The 12 credit hours required for the concentration can be obtained by taking elective classes already available for MSF students.

MSFE

The concentration also makes no change to the POS for the MSFE degree. One of the classes required for the concentration is already a core class for MSFE (FIN 567 in the spring) and the other two classes can be taken as part of the offerings in the final semester – one as a core class and one as the final semester elective.

Program Description and Justification

Provide a **brief** description and justification of the program, including highlights of the program objectives, and the careers, occupations, or further educational opportunities for which the program will prepare graduates, when appropriate.

This proposal seeks the approval of a new Data Analytics in Finance Concentration for the Master of Science in Finance Graduate Program and the Master of Science in Financial Engineering Program. The proposed concentration is designed to enhance graduate students' knowledge, skills, and professional opportunities related to using data analytic skills to solve business problems and effectively communicate analyses, findings, and conclusions. The proposed Data Analytics in Finance Concentration requires students to complete twelve graduate hours of coursework.

There are two key motivations for the proposed Data Analytics in Finance Concentration.

One, the knowledge, technical skill, and professional requirements for students entering finance and consulting jobs have evolved to include many aspects of data analytics. Many major finance firms have formally and informally highlighted the evolving requirements of finance graduates in areas of business and data analytics.

Two, research suggests that there is a need to train students in this important area. A 2016 survey of 422 European and U.S. executives conducted by the Economist Intelligence Unit reports that analytics and big data will be the most important digital competency for their organizations in the next three years. In response, the AACSB is pushing business schools to respond by adding data analytics to their curricula. For example, in May 2019, there will be a Data Analytics Summit with the following brief:

“Business demand for graduates with data analytics knowledge and skills has exploded, while the field itself is still evolving and changing rapidly, with new strategies, tools, and techniques coming online daily. These dynamics are challenging business schools to respond with innovative programs and curricular approaches that are connected deeply with practice. This seminar will focus on how to develop, implement and deliver data analytics programs and other curriculum components that meet the highest academic standards consistent with AACSB accreditation expectations, as well as the needs of the business community and prospective students.”

The proposed Data Analytics in Finance Concentration is designed to meet the large demand for these skills, leading to the Department of Finance's future continued success at educating graduate students.

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Enrollment

Number of Students in Program (estimate)

Year One Estimate

50

5th Year Estimate (or when fully implemented)

100

Delivery Method

This program is available:

Face-to-Face

Budget

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

No

Additional Budget Information

Current academic and administrative staff in the Department of Finance and the Gies College of Business office have the capacity to serve as advisors, maintain records, and process student registration in the concentration and related coursework.

Current instructional staff in the Department of Finance will offer and instruct the courses. No other additional/incremental resources are necessary for this concentration. If there are unforeseen demands for extra capacity, some existing faculty can be shifted out of relatively low-demand electives, with minimal disruption to overall learning outcomes of students.

No other additional / incremental resources are necessary for this concentration. We do not anticipate having to shift or otherwise alter existing capacity. No additional campus or external resources are needed for this concentration.

We will use currently available resources to fund the appointments. A letter from the college is attached.

Attach File(s) [Letter of Support.pdf](#)

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.

Courses for the concentration are already being taught by faculty in the department. In response to student demand for these courses (even in the absence of the concentration), over the past two years the department has hired several tenure-track and specialized faculty who specialize in data analytics and application of these tools in finance. In addition, there is ample capacity within the department to reallocate teaching assignments toward these courses if enrollment warrants additional sections of the courses. Teaching loads for finance faculty are between three and six course sections (three for tenure-track faculty and six for specialized faculty). Our classrooms can typically accommodate up to 68 students per section.

Currently, graduate students in the Master of Science in Finance program take a variety of electives, primarily in finance. Students electing to complete the Data Analytics in Finance Concentration will use three of their electives to complete the concentration. Since the courses already exist, in many cases there will be no change in enrollments as students will satisfy the concentration requirements for courses they are already taking. In others, students may shift between electives, but in most cases this will involve shifting from other finance electives to courses in the concentration. Given the relatively specialized focus of the concentration, we do not anticipate any negative impact on course enrollment in other units. On the contrary, there may be positive spillovers when interested students seek to enhance their skills by enrolling in advanced electives in other disciplines.

Library Resources

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

The proposed concentration emphasizes areas where the University has accumulated considerable intellectual and physical resources (engineering, computer science, mathematical science). Accordingly, we do not expect that the University Library will have to make investments to support research and teaching in new fields of inquiry.

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?

Current academic and administrative staff in the Department of Finance and the Gies College of Business office have the capacity to serve as advisors, maintain records, and process student registration in the concentration and related coursework.

Current instructional staff in the Department of Finance will offer and instruct the courses. We expect that introducing the concentration will increase the appeal of the MS Finance/MS Financial Engineering programs, thereby expanding enrolment and generating incremental revenues that should more than cover any additional costs.

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

No

Attach letters of support

Program Regulation

Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable.

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.

No licensure or certification requirements for this 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.

For new programs, attach Program of Study

[FIN 510 Big Data Analytics in Finance for Predictive and Causal Analysis - DRAFT COPY.pdf](#)

[FIN 510 Big Data Analytics in Finance for Predictive and Causal Analysis.pdf](#)

[FIN 555 Financial Innovation.pdf](#)

[FIN 553 Machine Learning in Finance.pdf](#)

[FIN 552 Applied Financial Econometrics.pdf](#)

Catalog Page Text

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

<http://catalog.illinois.edu/graduate/graduate-majors/finance/#masterstext>. A statement will be needed on this page for the MSF that outlines how the concentration fits in with the existing program of study.

<http://catalog.illinois.edu/graduate/graduate-majors/financial-eng/#masterstext>
A statement will be needed on this page that outlines how the concentration fits in with the existing program as described in this proposal.

Statement for Programs of Study Catalog

Completion of this concentration requires twelve hours of coursework, comprised of FIN 510: Big Data Analytics in Finance (4 credit hours)

And **any two** of the following graduate courses:

FIN 552: Applied Financial Econometrics (4 credit hours)

FIN 553: Machine Learning in Finance (4 credit hours)

FIN 555: Financial Innovation (4 credit hours)

FIN 567: Financial Risk Management (4 credit hours)

FIN 580 DA: Data Analytics in Finance (4 credit hours)

EP Documentation

Attach [RE_Finance Data Analytics Concentration.pdf](#)

Rollback/Approval

Notices

DMI Documentation

Attach Final

Approval Notices

Attached

Document

Justification for
this request

Program Reviewer

Comments

Deb Forgacs (dforgacs) (01/15/19 4:44 pm): Rollback: Sponsor name and college contact are needed. Also explanation about the new course FIN 510 - either the course needs to be approved before the program can move forward OR attach the information about the new course.

Deb Forgacs (dforgacs) (01/18/19 4:03 pm): Rollback: You can add the additional degree for MSFE by hitting the plus (+) sign next to corresponding programs and chose the Financial Engineering MS program.

Allison McKinney (agrindly) (03/05/19 2:19 pm): Rollback: Please complete the concentration questions: Will you admit to the concentration directly? Is a concentration required for graduation? Please also clarify how the concentration fits or is in addition to the current program requirements for both the MSF and the MSFE programs. The POS statement should include how the POS will change for the MSF and the MSFE programs.

Kathy Martensen (kmartens) (04/05/19 11:07 am): Rollback: Received by Senate EPC past deadline. Held until AY 2019-20.

Kathy Martensen (kmartens) (05/14/19 10:55 am): Submitted to 2018-19 EPC; carried over to AY 2019-20. Sponsors may use this version or revise for 2019-20 EPC consideration in FA 19.

Kathy Martensen (kmartens) (08/21/19 1:58 pm): Edited effective term requested to SP 20.

Kathy Martensen (kmartens) (10/03/19 4:12 pm): Rollback: Discussed at Senate

Educational Policy Committee 9/23/19; rolled back to address: 1) FIN 510 flagged at time of original submission as a course that did not exist; 2) Not enough regularly taught courses available in the list of options to allow students to complete the concentration without enrolling in a specific section of a special topics course. See email in EPC Documentation section for details.