Graduate Council Curriculum Committee
March 22, 2017
2:30 p.m., Millican Hall 395E

Agenda

1. Welcome and call to order
2. Approval of the minutes from the last meeting (curriculum, course)
3. **Addition of COS Math MS – Financial Mathematics track,** effective Fall 2017.
4. **Addition of COS Math PhD – Financial Mathematics track,** effective Fall 2017.
5. **Request for COS split level class GLY 4XXX/5XXX Marine Geoscience**
6. **Request for COS split level class PCB 4XXX/5XXX Wildlife Genomics**
7. **Inactivation of COHPA Social Work MSW tracks,** effective Summer 2017. This applies to these MSW tracks: Daytona Part Time, Osceola Part Time, and Daytona Regional Campus.
8. **Revision to COHPA Master of Public Administration / Master of Nonprofit Management Dual Degree,** effective Fall 2017.
9. **Name change for CEHP Education PhD, Instructional Technology track**, effective Fall 2017. New track name is Instructional Design and Technology.
10. **Addition of COM Biomedical Sciences MS, Integrated Medical Sciences track,** effective Fall 2018.
11. **Request for CAH split level class MUS 4XXX/5XXX Music Performance Workshop**
12. Review of graduate certificates for sunsetting (report).
13. Courses and special topics
14. Adjournment

Members of the Graduate Council Curriculum Committee

Kerry Purmensky, Chair, CAH
Charles Kelliher, CBA
Jim Moharam, Steering Liaison, COP
Elsie Olan, CEHP
Jennifer Sandoval, COS
Asli Tasci, RCHM
Art Weeks, CECS
Diane Andrews, CON
Steven Ebert, COM
Mercedeh Khajavikhan, COP
Terrie Sypolt, LIB
Joshua Troche, COHPA
Andrea Pulido, GSA
John Weishampel, CGS Liaison
Devon Jensen, CGS Liaison

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

NEW FORM – BEGINNING FALL 2015

Program Recommendation Form - ADDITIONS ONLY

This form is to be used to **ADD** degree programs, tracks, or certificate programs. If there are tracks being added to the program, one form may be used for both the program and the track(s).

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of items to be attached with completed form:

☑ Complete and current Graduate Catalog copy (www.graduatecatalog.ucf.edu), including description, curriculum, contact information, application requirements, and application deadlines.

☐ A list of faculty who will participate in the program, track or certificate and their credentials.

☐ If applicable, a written agreement from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate.

☐ Course Action Request forms, as needed.

☐ Library assessment of resources.

College/Unit(s) Submitting Proposal: College of Science

Proposed Effective Term/Year: Fall 2017

Unit(s) Housing Program: Department of Mathematics

Name of program, track and/or certificate: Master program with financial mathematics track

Please check all that apply: This action affects a: ☐ Program ☑ Track ☐ Certificate

DELIVERY: Program will be delivered: ☑ Face to Face ☐ Completely Online ☐ Mixed Delivery

Will the program be a **market tuition rate** program? ☐ Yes ☑ No

Brief description of program and rationale for the addition: **Do not add complete catalog copy here.**

The Financial Mathematics Track in the Mathematics master program is designed to prepare students to pursue careers in the finance industry by providing them with high quality professional training in applicable mathematics to finance. This track has three components: training in the necessary mathematics to pursue a career in financial mathematics, professional training in financial mathematics, and a required experiential component.
Financial industry is an area of growth and opportunity for the US economy. It calls for rigorous mathematical method to find out patterns from huge amounts of financial/economic data.
This program is an important investment in the support of the growth of the finance industry in the State of Florida. In particular, it provides support for strategic job investment at the Citi campus in Tampa.
In Florida, there are only two master programs on Mathematical Finance, at Florida State University and University of Miami.

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☑ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

Will students have the option to stay in their existing program, track, or certificate? ☑ Yes ☐ No

If yes, how will current students be impacted by the addition of a program, track or certificate?

Students in the current master program have the option to stay on the existing program or to select Financial Mathematics Track.

Future Students

Provide a statement of who is likely to enroll and why. Please state if there is licensure or certification that depends upon this education, etc. Also, complete the following table.

Students enrolled in the Mathematical Finance Track should have a strong mathematics background and high interest in mathematical finance.

No licensure or certification needed for the admission of the Mathematical Financial track.

	Year 1	Year 2	Year 3
Headcount	3	6	6
SCHs	54	108	108

Indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

Analyst in financial industry (such as bank, investment company), government, non-governmental organizations (such as IMF, World Bank).

Please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1	1	GTA, Math Dept	1 (Graduate Fellowship)	1	Math Dept
Year 2	1	GTA, Math Dept	1(Graduate Fellowship)	1	Math Dept.
Year 3	1	GTA, Math Dept	1 (Graduate Fellowship)	1	Math Dept.

Signature Page

Recommend Approval (all approval levels must be signed)

Department Chair /Director	(Print) Xin Li		(Signature) Xin Li	Date	1/24/2017
College Academic Standards	(Print) Sara L. Jaworski		(Signature)	Date	3/3/17
College Dean	(Print) M. Johnson		(Signature)	Date	2017-3-3
Graduate Council	(Print)		(Signature)	Date	
Graduate Dean	(Print)		(Signature)	Date	

Approval

Provost and Executive Vice President: _____ **Date** _____

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

Memo

To: Dr. Xin Li, Department Chair, Mathematics Department
Dr. Joseph Brennan, Associate Chair, Mathematics Department
Dr. Jana Jasinski, Associate Dean, College of Sciences
Mrs. Ying Zhang, Department Head, Acquisitions and Collections
Ms. Mary Page, Associate Director, Technical Services
Mr. Barry Baker, Director of Libraries
Dr. John Weishampel, Liaison, College of Graduate Studies
Dr. Elizabeth Klonoff, Vice President for Research & Dean, College of Graduate Studies

From: Sandy Avila, Interim Science Librarian

Subject: Library Evaluation of the Proposal to add a Master's Program and a Ph.D Program in Financial Mathematics in the Department of Mathematics in the College of Sciences

Date: March 20, 2017

When reviewing library support for a new Master's Program and Ph.D Program in the College of Sciences, we selected the following institutions for the comparison:

- Florida State University
- Carnegie Mellon University
- University of Miami
- North Carolina State University
- Boston University

Summary and projected Costs for New Library Resources:
In comparing with the library collections at the selected aspiring programs, UCF Libraries recommends the following with regard to databases: For the Master's track, no new databases are needed. However, for the Ph.D track, the doctoral students will need access to both CompuStat plus ThomsonOne at the very least. Wharton Research Data Services is preferred because it includes ComputStat and ThomsonOne plus it has additional resources that would be valuable. The UCF College of Business—Finance has paid for a license for CompuStat for use by its Business students. Your proposed track can decide at what level you will support your students and faculty. In addition, UCF Libraries will need to add some monographs to fill the gaps in collections. The total cost for library materials for the first year to begin the new Master's Program and Ph. D Program in Financial Mathematics is $24,447.00. For costs in subsequent years, see the chart below. After the five year period costs will continue so money will need to be added to the Library budget to cover those expenses, especially for database subscriptions.

In the unfortunate event library budget shortfalls occur, some existing resource subscriptions may be cut or scaled back.

Projected costs needed to acquire library materials to support the new Master's Program and Ph.D Program in Financial Mathematics

	2017	2018	2019	2020	2021	2022
Databases	$23,447.00	$46,849.00	$49,191.45	$51,651.02	$54,236.57	$56,948.40
Journals	$ 0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Books	$1000.00	$1000.00	$1000.00	$1000.00	$1000.00	$1000.00
Total	**$24,447.00**	**$47,849.00**	**$50,191.45**	**$52,651.02**	**$55,236.57**	**$57,948.40**

Comparative Analysis on key library resources supporting the new Master's Program and Ph.D Program in Financial Mathematics

Databases

Database Titles	UCF	FSU	CMU	UM	BU	NC State
ReferenceUSA			X		X	X
COMPUStat			X		X	X
ThomsonOne			X	X		X
Morningstar Investment Research Center				X		X
Standard and Poor's Net Advantage	X		X	X		X
MergentOnline	X	X	X	X	X	
Lexis Nexis Academic	X	X	X	X	X	X
MathSciNet	X	X	X	X	X	X
Directory of Open Access Journals (DOAJ)	X				X	
Business Source Premier	X	X		X	X	X
Vault Career Library	X		X			
ABI/Inform Complete	X	X	X	X	X	X
Science Direct	X	X	X	X	X	X
Web of Science	X	X	X	X	X	X
Academic Search Premier	X	X	X	X	X	X
Business Insights Essentials	X	X		X		
Business Economics and Theory	X					
JSTOR	X	X	X	X	X	X
Wharton Research Data Services					X	X

Databases: UCF Libraries' database list only lacks four databases held by some of the other institutions in our comparison. A description of the contents of each database follows below with associated pricing.

- COMPUStat
- ThomsonOne
- Morningstar Investment Research Center
- Wharton Research Data Services

COMPUStat is a database of financial, statistical and market information on active and inactive global companies throughout the world. The service began in 1962.
Cost: $8,000 additional to Business Department $40,000 annual subscription.

ThomsonOne provides access to financial data on public companies, as well as merger and acquisition information and market data. Users can search and screen to identify companies that meet specific investment criteria. Also contains Worldscope fundamental financial data for non-U.S. public companies.
Cost: $4,000/month, $48,000 yearly

Morningstar Investment Research Center is an interactive investment database with information on more than 30,000 stocks, mutual funds, and exchange-traded funds. It combines cutting-edge technology with Morningstar's investment know-how to give your patrons a one-stop investment site. Designed specifically for libraries, it provides independent analysis, industry information, stock charts, portfolio building tools, and investment education.
Cost: $10,295 for unlimited access for the year

Wharton Research Data Services provides comprehensive sources of financial, accounting, economic, management, marketing, banking, and insurance data. The Boston University subscription includes the following datasets:Audit Analytics, Compustat Global, Compustat North America, CRSP – Center for Research in Security Prices, CRSP – Mutual Fund, CUSIP Master File, Eventus, I/B/E/S from Thomson Reuters, Institutional Shareholder Services (formerly RiskMetrics), MSCI ESG KLD Stats, Thomson Reuters.

Cost: $23,447 for the first year at a 50% discount, $46,849 market price for subsequent years

The UCF Libraries recommends that we seriously look at Wharton Research Data Services as a comprehensive database that houses all the datasets we are missing from our current electronic resources. In comparison to other institutions, we are in otherwise good shape minus the one database that is comprehensive with regard to analytics and risk management. Since UCF will be supporting Ph.D level students, it is imperative that we are able to properly support them in their research as UCF works towards their preeminent public research institution status by 2020. The library resources are important to this endeavor. For a Master's Program we could do without this database, but because of the proposed doctorate program, UCF should subscribe to Wharton Research Data Services or CompuStat, and ThomsonOne.

Should major budget cuts occur, some databases and/or journals on this list could be cut.

Key Journals

Journal Titles	UCF	FSU	CMU	UM	BU	NC State
SIAM Journal of Financial Mathematics	X	X		X	X	X
Journal of Mathematical Finance	*			X	X	
Journal of Approximation theory and Applied Mathematics	*					X
Mathematics and Financial Economics	X	X	X	X	X	X
Revista de metodos cuantitativos para la economia y la empresa	X	X	X	X	X	X
Quantitative Finance	X	X			X	X
IMA Journal of Management Mathematics	X	X		X		X
Rect@: Revista electronica de comunicaciones y trabjajos de	*	X	X	X	X	

Journal Titles	UCF	FSU	CMU	UM	BU	NC State
ASEPUMA						
Applied Stochastic Models in Business and Industry	X	X	X	X	X	X
Applied Mathematical Finance	X	X	X	X	X	X
Mathematical Finance: An International Journal of Math, Stats, and Financial Theory	X	X	X	X	X	X
IMA Journal of Mathematics Applied in Business and Industry	X	X		X	X	X
Cuadernos del CIMBAGE	*	X	X	X	X	
International Journal of Theoretical and Applied Finance	X	X	X	X	X	X
Annals of Applied Probability	X	X	X	X	X	X
Finance and Stochastics	X	X	X		X	X
Journal of Modelling in Management	X	X	X	X	X	X
SIAM Journal of Numerical Analysis	X	X		X	X	X
Journal of Applied Mathematics	X	X	X	X	X	X
The Journal of Financial Engineering	X	X		X	X	X
Management Science and Financial Engineering	*	X	X	X	X	X
The Journal of Derivatives: A Publication of Institutional Investor, Inc.	X	X		X	X	X
International Journal of Stochastic Analysis	X	X	X	X	X	X
Journal of Applied Mathematics and Stochastic Analysis	X	X	X	X	X	X
International Journal of Computational Methods	X	X			X	
Communications in Numerical Methods in Engineering	X	X	X	X	X	X
International Journal of Engineering Mathematics	*	X	X	X	X	
Analysis and Applications	X	X		X	X	X
International Journal of Computational Engineering Science	X	X	X	X	X	X
Journal of Computational Engineering	X	X	X	X	X	
Journal of Engineering Mathematics	X	X	X	X	X	X
Journal of Financial Innovation	X	X	X	X	X	

Journals: In order to support the new Master's Program and Ph.D Program in Financial Mathematics, journal subscriptions to the following are suggested:

- Journal of Mathematical Finance * (available for free via http://www.scirp.org/journal/jmf/)

- Journal of Approximation Theory and Applied Mathematics * (available for free via DOAJ)
- Rect@ * (available for free; information from the journal website: http://www.revistarecta.com/
- Cuadernos del CIMBAGE * (available for free via DOAJ)
- Management Science and Financial Engineering * (available for free via their website: http://www.koreascience.or.kr/journal/AboutJournal.jsp?kojic=E1MSAQ
- International Journal of Engineering Mathematics * (available for free via their website: https://www.hindawi.com/journals/ijem/)

Below is an explanation of what each journal brings to the program with an outline of costs. In some cases the journals are available via Open Access channels and no cost to UCF is involved, although a formal record would need to be added to our library catalog.

Journal of Mathematical Finance aims at presenting the latest developments in pure and applied financial mathematics. It considers important theoretical, empirical and review papers in the following areas: financial engineering, financial statistics, pricing theory of securities and portfolio, quantitative economics, solutions to PDEs, stochastic optimization and control, and stochastic processes. The journal is available for free via the SCIRP website: http://www.scirp.org/journal/jmf/

Journal of Approximation Theory and Applied Mathematics is actually available for free via the following website: jatame.de/ . The journal began back in 2013 and focuses on the areas of approximation theory, with a focus on wavelengths, and applications in mathematics like numerical analysis, statistics, and financial mathematics. The resource is available for free via DOAJ- Directory of Open Access Journals.

Rect@ is a journal that publishes articles related to the theory and applications of Mathematics in general, as well as Statistics, and Informatics in the field of Economics and Business. The initial stand for R-evista, E-lectronic, of C-ommunications and T-rabajos of @SEPUMA. The journal is available for free from their website. http://www.revistarecta.com/

Cuadernos del CIMBAGE is a publication of the Center for Research in Blurred Methodologies applied to the Management and Economics of the Faculty of Economics of the University of Buenos Aires. The journal includes applications of logic and mathematics to management and economics issues, especially those related to the treatment of uncertainty using fuzzy set theory. It is aimed at researchers, academics and specialists in these areas. Its objective is to disseminate unpublished articles, technical reports, standards or specifications. The resources is available for free via DOAJ.

Management Science and Financial Engineering is a peer-reviewed English language journal that publishes scientific research and surveys on management science and financial engineering. This international journal aims at publishing high quality original works that have significant theoretical, methodological, empirical advances in management science and financial engineering as well as promoting collaboration from these cross-disciplinary fields to develop new technologies and applications in related areas. The journal is published biannually (May and Novemeber) and supported by the Korea Operations Research and Management Science Society (KORMS). The resource is available for free via their website: http://www.koreascience.or.kr/journal/AboutJournal.jsp?kojic=E1MSAQ

International Journal of Engineering Mathematics is a peer-reviewed, open access journal that publishes original research articles as well as review articles in all areas of engineering mathematics. The resource is available for free from their website: https://www.hindawi.com/journals/ijem/)

Cost: $0.00 since all are available via open access channels

Books

Subject Headings	**UCF**	**FSU**	**CMU**	**UM**	**BU**	**NC State**
Business Mathematics	558	586	169	581	140	487
Financial Engineering	75	42	38	72	80	143
Financial Risk Management	61	181	35	136	60	220
Stochastic Analysis	206	260	99	259	173	434
Stochastic Volatility Models	1	2	0	2	0	0
Mathematical statistics– data processing	198	138	108	137	99	458
Mathematics – economics	532	579	369	0	1	197
Finance – Mathematical Models	210	166	226	362	241	685
Applied Mathematics—numerical analysis	7	5	26	0	9	51
Asymptotic Methods	21	68	1	5	3	29
Statistical Modelling	1665	425	102	1	5	26
Finite Differences	123	102	12	85	29	251
Capital Market - Stability	48	1	198	117	0	2
Measure Theory	181	172	113	2	0	375
Monte Carlo Method	341	369	99	20	165	419
Ito Calculus	40	0	0	1	4	0
Corporations - Finance	852	769	0	17	516	1537
Statistical Theory	1106	684	69	9	314	994
Business- Mathematical Models	15	36	96	13	10	245
Derivative Securities - Prices-Mathematical Models	36	17	15	21	11	44
Total books	**6276**	**4602**	**1775**	**1840**	**1860**	**6597**

Books: The analysis of the book collection shows that UCF Libraries will need to add some books in order to support the new Master's Program and Ph.D Program in Financial Mathematics, adding new publications over the next 5 years. We currently compare very favorably in the area of books as we look at other institutions with similar programs. However, since we will be supporting Ph.D students, we do need to grow some subject areas to provide ample support to them. I suggest that the UCF Libraries purchase additional titles in the following subject areas in the first year and subsequent 5 years in order to build the collection:

Applied Mathematics—numerical analysis
Stochastic Volatility Models
Financial Risk Management
Business- Mathematical Models

Books total costs: $ 1000.00 for the first year + $1000.00 for the next 5 years (see Appendix 1 for a list of titles and pricing)

Title: NUMERICAL METHODS IN COMPUTATIONAL MECHANICS. **ISBN:** 9781498746755
Author: GHABOUSSI, J
Publisher: SPON PRESS **Pub Year:** 2017 **Binding:** Cloth
LC Class: TA335.G43 2017 **Content Level:** ADV-AC **YBP Select:** Supplementary
Language: English
US List: 99.95 USD **US Status:** In Stock **Rush:** Available
UK List: 63.99 GBP **UK Status:** In Stock
Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/2E) GobiTween (12 Slips)
ProtoView

Title: 2D AND 3D IMAGE ANALYSIS BY MOMENTS. **ISBN:** 9781119039358
Author: FLUSSER, JAN
Publisher: JOHN WILEY **Pub Year:** 2017 **Binding:** Cloth
LC Class: TA1637.F58 2016 **Content Level:** ADV-AC **YBP Select:** Research-Recommended
Language: English
US List: 130.00 USD **US Status:** Orders accepted
Also Available From: GOBI BookZone
UK List: 81.50 GBP **UK Status:** In Stock
Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/3E) GobiTween (1 Book/19 Slips)

Title: SOLVING FAULT DIAGNOSIS PROBLEMS: LINEAR SYNTHESIS TECHNIQUES. **ISBN:** 9783319515588
Author: VARGA, ANDREAS
Publisher: SPRINGER **Pub Year:** 2017 **Binding:** Cloth
LC Class: T
Language: English
US List: 179.00 USD **US Status:** Not yet published
UK List: Not Known
Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/1E) GobiTween (1 Book)

Title: FAULT DIAGNOSIS AND FAULT-TOLERANT CONTROL BASED ON ADAPTIVE CONTROL APPROACH. **ISBN:** 9783319525297
Author: SHEN, QIKUN
Publisher: SPRINGER **Pub Year:** 2017 **Binding:** Cloth
LC Class: T
Series Title: STUDIES IN SYSTEMS, DECISION AND CONTROL. **Series Volume:** 91 **Series Format:** Print
Language: English
US List: 129.00 USD **US Status:** In Stock
UK List: Not Known
Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/1E) GobiTween (1 Book)

Title: STOCHASTIC MODELS, STATISTICS AND THEIR APPLICATIONS **ISBN:** 9783319138800
Author: WORKSHOP ON STOCHASTIC MODELS, STATISTICS AND THEIR APPLICATIONS (12TH: 2015: WROCLAW, POLAND)
Editor: ANSGAR STELAND
Publisher: SPRINGER **Pub Year:** 2015 **Binding:** Cloth
LC Class: QA274.2.W67 2015 **Content Level:** PROF **YBP Select:** Specialized
Series Title: SPRINGER PROCEEDINGS IN MATHEMATICS & STATISTICS. **Series Volume:** 122 **Series Format:** Print
Language: English
US List: 169.00 USD **US Status:** In Stock
UK List: Not Known
Added To List: 3/21/2017
Library Note: Add...
alt-ed eCollection invoiced (2/11/2015) alternate editions (1P/1E) GobiTween (3 Books/11 Slips)

Title: UNCERTAINTY QUANTIFICATION AND STOCHASTIC MODELING WITH MATLAB. **ISBN:** 9781785480058
Author: CURSI, EDUARDO SOUZA DE
Publisher: ELSEVIER **Pub Year:** 2015 **Binding:** Cloth
LC Class: QA274.2 **Content Level:** ADV-AC **YBP Select:** Research-Recommended
Language: English
US List: 185.00 USD **US Status:** In Stock
UK List: 115.00 GBP **UK Status:** In Stock
Added To List: 3/21/2017
Library Note: Add...
slip sent (8/5/2015) alternate editions (1P/1E) GobiTween (1 Book/12 Slips)
ProtoView

Title: STOCHASTIC MODELING FOR MEDICAL IMAGE ANALYSIS. **ISBN:** 9781466599086
Author: EL-BAZ, AYMAN S
Publisher: CRC PRESS **Pub Year:** 2016 **Binding:** eBook
LC Class: RC78.7.D53 **Content Level:** ADV-AC **YBP Select:** Research-Recommended
Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+CRC Press	Multi-user		285.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 4/16/2015			**Handled On Approval YBP-US:** 2/3/2016			
eCollections: BIOMEDICALSCIENCENETBASE; BIOSCIENCENETBASE; PHYSICSNETBASE; SCI-TECHNETBASE; STMNETBASE;						
+EBL	1 User		189.95 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 11/24/2015						
+EBL	3 User		237.44 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 11/24/2015						
+EBL	Non-Linear Lending™	Yes	284.93 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 11/24/2015			**Handled On Approval YBP-US:** 2/10/2016			
+ebrary	3 User		237.44 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 11/30/2015						
+ebrary	Single User Option (SUPO)		189.95 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 11/30/2015			**Handled On Approval YBP-US:** 2/3/2016			
+EBSCOhost	1 User		189.95 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 12/3/2015			**Handled On Approval YBP-US:** 2/10/2016			
+EBSCOhost	3 User		237.44 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 12/3/2015						
+EBSCOhost	Concurrent Access		284.93 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 5/20/2016						

Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/1E) GobiTween (6 Slips)

Title: CHANGE OF TIME AND CHANGE OF MEASURE. **ISBN:** 9789814678582

Author: BARNDORFF-NIELSEN, O. E. (OLE E.)

Publisher: WORLD SCIENTIFIC **Pub Year:** 2015 **Binding:** Cloth

LC Class: QA274.28.B37 2015 **Content Level:** ADV-AC **YBP Select:** Supplementary **Edition:** 2ND ED.

Series Title: ADVANCED SERIES ON STATISTICAL SCIENCE & APPLIED PROBABILITY. **Series Volume:** 21 **Series Format:** Print

Language: English

US List: 68.00 USD **US Status:** In Stock

UK List: 56.00 GBP **UK Status:** In Stock

Added To List: 3/21/2017

Library Note: Add...

GobiTween (2 Books/8 Slips)
ProtoView

Title: STOCHASTIC CALCULUS FOR QUANTITATIVE FINANCE. **ISBN:** 9780081004760

Author: GUSHCHIN, ALEXANDER A

Publisher: ELSEVIER **Pub Year:** 2015 **Binding:** eBook

LC Class: QA274 **Content Level:** ADV-AC **YBP Select:** Research-Recommended

Series Title: MATHEMATICS AND STATISTICS SERIES. **Series Format:** Print

Series Title: OPTIMIZATION IN INSURANCE AND FINANCE SET. **Series Format:** Print

Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+EBL	1 User		126.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/5/2015						
+EBL	3 User		157.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 2/10/2017						
+EBL	Non-Linear Lending™	Yes	189.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 2/13/2017						
+EBL	Unlimited	Yes	189.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/28/2015			**Handled On Approval YBP-US:** 10/21/2015			
+ebrary	Multiple User Option (MUPO)		189.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/31/2015						
+ebrary	Single User Option (SUPO)		126.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 8/31/2015			**Handled On Approval YBP-US:** 10/21/2015			
+EBSCOhost	1 User		126.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/28/2015			**Handled On Approval YBP-US:** 10/21/2015			
+EBSCOhost	3 User		157.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/31/2015						
+EBSCOhost	Unlimited User		189.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/31/2015						
+Elsevier ScienceDirect	Multiple User Access		165.00 USD	Available	Contract on file	
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/12/2015			**Handled On Approval YBP-US:** 11/11/2015			

Added To List: 3/21/2017

Library Note: Add...

alt-ed slip sent (11/11/2015) alternate editions (1P/1E) GobiTween (4 Books/12 Slips)

Title: STOCHASTIC MODELING. **ISBN:** 9783319500379
Author: LANCHIER, NICOLAS
Publisher: SPRINGER **Pub Year:** 2017 **Binding:** Paper
LC Class: QA274.2.L36 2017 **Content Level:** ADV-AC **YBP Select:** Supplementary
Series Title: UNIVERSITEXT. **Series Format:** Print
Language: English
US List: 79.99 USD **US Status:** In Stock
UK List: 52.99 GBP **UK Status:** Not yet published
Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (2 Books/5 Slips)

Title: MARKET RISK ANALYSIS; V. III: PRICING, HEDGING AND TRADING FINANCIAL INSTRUMENTS. **ISBN:** 9780470772812
Author: ALEXANDER, CAROL
Publisher: JOHN WILEY **Pub Year:** 2008 **Binding:** eBook
LC Class: HG106 **Content Level:** ADV-AC **YBP Select:** Supplementary
Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+EBL	1 User		125.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/1/2015						
+EBL	3 User		187.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/1/2015						
+EBL	Non-Linear Lending™	Yes	187.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 11/6/2008			**Handled On Approval YBP-US:** 11/12/2008			
+ebrary	3 User		187.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 3/4/2013						
eCollections: ACADEMIC COMPLETE; F07 BUSINESS;						
+ebrary	Single User Option (SUPO)		125.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 4/24/2009			**Handled On Approval YBP-US:** 4/29/2009			
eCollections: ACADEMIC COMPLETE; F07 BUSINESS;						
+EBSCOhost	1 User		125.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 2/2/2009			**Handled On Approval YBP-US:** 2/25/2009			
+EBSCOhost	3 User		187.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/30/2012						

Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (1 Book/10 Slips)

Title: MARKET RISK ANALYSIS; V. I: QUANTITATIVE METHODS IN FINANCE. **ISBN:** 9780470771020
Author: ALEXANDER, CAROL
Publisher: JOHN WILEY **Pub Year:** 2008 **Binding:** eBook
LC Class: HG106 **Content Level:** ADV-AC **YBP Select:** Supplementary
Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+EBL	1 User		85.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/1/2015						
+EBL	3 User		127.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/1/2015						
+EBL	Non-Linear Lending™	Yes	127.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 7/26/2010			**Handled On Approval YBP-US:** 8/4/2010			
+ebrary	3 User		127.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 3/4/2013						
eCollections: ACADEMIC COMPLETE; F07 BUSINESS;						
+ebrary	Single User Option (SUPO)		85.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 6/8/2009			**Handled On Approval YBP-US:** 6/17/2009			
eCollections: ACADEMIC COMPLETE; F07 BUSINESS;						
+EBSCOhost	1 User		85.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/11/2010			**Handled On Approval YBP-US:** 8/18/2010			
+EBSCOhost	3 User		127.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/30/2012						

Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (1 Book/4 Slips)

Title: STOCHASTIC CALCULUS AND FINANCIAL APPLICATIONS. **ISBN:** 9780387950167
Author: STEELE, J. MICHAEL
Publisher: SPRINGER-VERLAG **Pub Year:** 2001 **Binding:** Cloth
LC Class: QA274.2.S74 2000 **Content Level:** ADV-AC
Series Title: PROBABILITY THEORY AND STOCHASTIC MODELLING. **Series Volume:** 45 **Series Format:** Print
Language: English
US List: 99.00 USD **US Status:** Out of print. Sourced to an out-of-print supplier
Also Available From: GOBI BookZone NON-RETURN/NON-CANCEL YBP-US
UK List: 66.99 GBP **UK Status:** Import Only
Added To List: 3/21/2017
Library Note: Add...

GobiTween (1 Book)

Title: STOCHASTIC PROCESSES WITH APPLICATIONS TO FINANCE. **ISBN:** 9781584882244
Author: KIJIMA, MASAAKI, 1957-
Publisher: CHAPMAN & HALL CRC **Pub Year:** 2003 **Binding:** Cloth
LC Class: QA274.K554 2002 **Content Level:** ADV-AC
Language: English
US List: 94.95 USD **US Status:** Out of print. Sourced to an out-of-print supplier
NON-RETURN/NON-CANCEL YBP-US
UK List: 73.99 GBP **UK Status:** Out of print. Sourced to an out-of-print supplier
Added To List: 3/21/2017
Library Note: Add...

GobiTween
ProtoView

Title: QUEUEING MODELS IN INDUSTRY AND BUSINESS. **ISBN:** 9781626188891
Author: HAGHIGHI, ALIAKBAR MONTAZER
Publisher: NOVA SCIENCE **Pub Year:** 2014 **Binding:** Cloth
LC Class: QA274.8.H34 2013 **Content Level:** ADV-AC **YBP Select:** Supplementary **Edition:** 2ND ED.
Series Title: BUSINESS ISSUES, COMPETITION AND ENTREPRENEURSHIP. **Series Format:** Print
Language: English
US List: 150.00 USD **US Status:** In Stock
UK List: 124.99 GBP **UK Status:** Orders accepted
Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (1 Book/5 Slips)

Title: QUEUEING MODELS IN INDUSTRY AND BUSINESS. **ISBN:** 9781628080865
Author: HAGHIGHI, ALIAKBAR MONTAZER
Publisher: NOVA SCIENCE **Pub Year:** 2014 **Binding:** eBook
LC Class: QA274.8.H34 2013 **Content Level:** ADV-AC **YBP Select:** Supplementary **Edition:** 2ND ED.
Series Title: BUSINESS ISSUES, COMPETITION AND ENTREPRENEURSHIP. **Series Format:** Print
Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+EBL	1 User		150.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 12/8/2015						
+EBL	3 User		225.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/12/2015						
+EBL	Unlimited		300.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/12/2015						
+ebrary	3 User		225.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 4/29/2014						
+ebrary	Multiple User Option (MUPO)		225.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 1/14/2014						
+ebrary	Single User Option (SUPO)		150.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 6/18/2013			**Handled On Approval YBP-US:** 3/26/2014			
+EBSCOhost	1 User		150.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 1/7/2014			**Handled On Approval YBP-US:** 3/26/2014			
+EBSCOhost	3 User		225.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 1/7/2014						
+EBSCOhost	Concurrent Access		300.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 12/2/2016						
+EBSCOhost	Unlimited User		300.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 1/7/2014						

Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (1 Book/5 Slips)

Mathematical Science Master

Financial Mathematics Track

TRACK DESCRIPTION

The Financial Mathematics track in the Mathematical Science MS program prepares graduate students to pursue careers in the finance industry by providing them with high quality professional training in of mathematics applicable to finance. This track has three components: training in the necessary mathematics to pursue a career in financial mathematics, professional training in financial mathematics, and a required experiential component.

CURRICULUM

The program consists of 30 credit hours of courses and internship. Students will work with an adviser to design a program of study, which will be presented to the program director for approval. If a student has an industrial sponsor, the student's program of study will be developed in consultation with a representative from his sponsoring company. Students are expected to obtain hands-on experience. The capstone requirement for this track is fulfilled by students completing an experiential learning requirement (3 credit hours). At least one-half of the program courses must be taken at the 6000 level.

Total Credit Hours Required:

30 Credit Hours Minimum beyond the Bachelor's Degree

Prerequisites

The following courses are required as prerequisites to this track: Calculus with Analytic Geometry I, II, and III; Differential Equations; Linear and Matrix Algebra (or a course equivalent); proficiency in a computer language; Elementary Probability and Statistics. A summer program of two courses, which cannot be used as part of the program of study for this degree, is available for students who have deficiencies in these prerequisite areas.

Required Courses—21 Credit Hours

- MAP 5XXX Differential Equations for Financial Mathematics (3 credit hours)
- MAP 5XXX Computational Methods for Financial Mathematics I (3 credit hours)
- MAP 5XXX Financial Mathematics I (3 credit hours)
- MAP 5XXX Proseminar in Financial Mathematics (1 credit hours)
- MAP 6XXX Financial Mathematics II (3 credit hours)
- MAP 6XXX Computational Methods for Financial Mathematics II (3 credit hours)
- MAP 6XXX Risk Management for Financial Mathematics (3 credit hours)
- MAP 6XXX Seminar in Financial Mathematics (2 credit hours)

Restricted Electives—6 Credit Hours

Students take two of the following courses:

- FIN 6406 Strategic Financial Management (3 credit hours)
- FIN 6515 Analysis of Investment Opportunities (3 credit hours)
- MAP 6207 Optimization Theory (3 credit hours)
- STA 6857 Applied Time Series (3 credit hours)
- STA 5703 Data Mining Methodology I (3 credit hours)
- STA 5825 Stochastic Processes and Applied Probability Theory (3 Credit hours)

Experiential Requirement—3 Credit Hours

Students will demonstrate experience in the application of mathematics to industrial problems. This demonstration can be accomplished either through the satisfactory completion of an internship in financial mathematics (MAP 6946), or through satisfactory performance at an approved external/internal workshop in financial mathematics (MAP 6946). Students are required as part of the experiential requirement to deliver an oral presentation on the experience. Students are very strongly encouraged to fulfill this requirement through an internship experience.

Application Requirements

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions section of the Graduate Catalog. Applicants must apply online. All requested materials must be submitted by the established deadline.

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- One official transcript (in a sealed envelope) from each college/university attended.
- Official, competitive GRE score taken within the last five years.
- A working knowledge of undergraduate calculus, differential equations, linear algebra (or matrix theory), proficiency in a modern computer language, elementary probability and statistics.

Students who are not adequately prepared in one or more of the required prerequisite subject areas can make up such deficiencies through a summer remedial program. Such courses, unless specially approved, will not count toward the graduate degree. Applicants not qualified for regular status may be admitted initially to the university in a non-degree seeking status. Transfer of credits from other programs will be considered on a course-by-course basis.

Meeting minimum UCF admission criteria does not guarantee program admission. Final admission is based on evaluation of the applicant's abilities, past performance, recommendations, match of this program and faculty expertise to the applicant's career/academic goals, and the applicant's potential for completing the degree.

Application Deadlines

All application materials must be submitted by the appropriate deadline listed below.

Financial Mathematics	***Fall Priority**	**Fall**	**Spring**	**Summer**
Domestic Applicants	Jan 15	Apr 30	------	-------
International Applicants	Jan 15	Jan 15	------	-------
International Transfer Applicants	Jan 15	Mar 1	------	-------

*Applicants who plan to enroll full time in a degree program and who wish to be considered for university fellowships or assistantships should apply by the Fall Priority date.

FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see the College of Graduate Studies Funding website, which describes the types of financial assistance available at UCF and provides general guidance in planning your graduate finances. The Financial Information section of the Graduate Catalog is another key resource.

Fellowships

Fellowships are awarded based on academic merit to highly qualified students. They are paid to students through the Office of Student Financial Assistance, based on instructions provided by the College of Graduate Studies. Fellowships are given to support a student's graduate study and do not have a work obligation. For more information, see UCF Graduate Fellowships, which includes descriptions of university fellowships and what you should do to be considered for a fellowship.

University of Central Florida

Department of Statistics

November 21, 2016

Xin Li, Ph.D.
Chair, Department of Mathematics
University of Central Florida
4393 Andromeda Loop N
Orlando, FL 32816

Re: Mathematical Finance

Dear Dr. Li,

The Department of Statistics welcomes the Department of Mathematics to add new tracks to their graduate program in the area of Mathematical Finance. In order to support these new tracks the Department of Mathematics are creating a family of new courses:

- ☐ MAP 5XXX Differential Equations for Financial Mathematics (3 credit hours)
- ☐ MAP 5XXX Computational Methods for Financial Mathematics I (3 credit hours)
- ☐ MAP 5XXX Financial Mathematics I (3 credit hours)
- ☐ MAP 5XXX Proseminar in Financial Mathematics (0 credit hours)
- ☐ MAP 6XXX Financial Mathematics II (3 credit hours)
- ☐ MAP 6XXX Computational Methods for Financial Mathematics II (3 credit hours)
- ☐ MAP 6XXX Risk Management for Financial Mathematics (3 credit hours)
- ☐ MAP 6XXX Seminar in Financial Mathematics (0 credit hours)

The Department of Statistics is happy to join with the Department of Mathematics in offering this program. Students in the program will take STA 6857 Applied Time Series as a required course in their program and may take one or more of STA 5703 Data Mining Technology I and STA 5825 Stochastic Processes and Applied Probability Theory as part of their program's restricted electives.

The Department of Statistics looks forward to continued collaboration with the Department of Mathematics to provide the students of UCF the best programs and opportunities possible.

Sincerely,

Shunpu Zhang, Ph.D.
Chair and Professor
Department of Statistics
University of Central Florida

Orlando, Florida 32816-2370 • (407) 823-1566 • Shunpu.Zhang@ucf.edu

University of Central Florida

Department of Finance

November 10, 2016

Professor Joseph Brennan
Chair,
Department of Mathematics
University of Central Florida.

Dear Professor Brennan:

You have informed me that the Department of Mathematics is creating a new track in two of your graduate degree programs: the Master of Science in Mathematical Sciences and the Doctor of Philosophy in Mathematics. These new tracks are in in the area of Financial Mathematics. In order to support these new tracks the Department of Mathematics is creating a family of new courses:

- MAP 5XXX Differential Equations for Financial Mathematics (3 credit hours)
- MAP 5XXX Computational Methods for Financial Mathematics I (3 credit hours)
- MAP 5XXX Financial Mathematics I (3 credit hours)
- MAP 5XXX Proseminar in Financial Mathematics (0 credit hours)
- MAP 6XXX Financial Mathematics II (3 credit hours)
- MAP 6XXX Computational Methods for Financial Mathematics II (3 credit hours)
- MAP 6XXX Risk Management for Financial Mathematics (3 credit hours)
- MAP 6XXX Seminar in Financial Mathematics (0 credit hours)

These courses promise to offer students at UCF the opportunity to acquire technical capability to use mathematics in the financial industry, an area of growth and opportunity for our students. It is to be hoped that students studying in the graduate programs of the Department of Finance and the Dr. P. Phillips School of Real Estate will be able to avail themselves of the opportunities presented by these course offerings.

Our department was approached as a potential partner in this program and we would have liked to participate in bringing this program to UCF. With deep regrets, I must say that due to very limited resources we are unable to participate in this program at this time.

It has been indicated that our participation would be welcomed, should the resources necessary to be a full participant arise in the future. I hope that that day will come. Until then, I wish the program the best of success.

Sincerely,

Ajai Singh
SunTrust Eminent Scholar Chair of Banking;
Professor & Chair, Department of Finance
& Director, Dr. P. Phillips School of Real Estate

College of Business Administration
P.O. Box 161400 • Orlando, FL 32816-1400 • (407) 823-3575 • Fax: (407) 823-6676

Tonya Walker

From: Jana Jasinski
Sent: Friday, January 27, 2017 4:46 PM
To: Tonya Walker
Subject: FW: Financial Math Track in the Mathematics PhD program

Tonya

Can you add this to the documentation for the Financial Math track.

Thanks!

Jana

Jana L. Jasinski, Ph.D.
Professor, Sociology & Associate Dean
College of Sciences
University of Central Florida

P.O. Box 161997
Orlando, FL 32816-1997

Office: 407.823.6568
Jana.Jasinski@ucf.edu

From: Ajai Singh
Sent: Friday, January 27, 2017 4:10 PM
To: Jana Jasinski <Jana.Jasinski@ucf.edu>
Cc: Taylor Ellis <tellis@bus.ucf.edu>
Subject: RE: Financial Math Track in the Mathematics PhD program

Dear Dr. Jasinski:

My Department does not have any objection to the doctoral program in Mathematics moving forward.

Thanks for checking with us.

Best,
Ajai

Ajai Singh
SunTrust Eminent Scholar Chair of Banking
Professor and Chair, Department of Finance
Director, Dr. P. Phillips School of Real Estate
College of Business Administration
University of Central Florida
12744 Pegasus Drive
Orlando, FL 32816-1400

PH: 407-823-0761
FAX: 407-823-6676
aks@ucf.edu

From: Jana Jasinski
Sent: Friday, January 27, 2017 1:45 PM
To: Ajai Singh <aks@ucf.edu>
Cc: Taylor Ellis <tellis@bus.ucf.edu>
Subject: Financial Math Track in the Mathematics PhD program

Good afternoon Dr. Singh,

In reviewing the materials for the proposed track in financial math, which is part of the doctoral program in Mathematics, I see that you have written a letter indicating that you will not be able to participate in this program track. I am writing to confirm, however, that you do not have any concerns with the program moving forward with this track. Please let me know whether you support the department of mathematics in their efforts to add this track to their program.

Best,

Dr. Jasinski

Jana L. Jasinski, Ph.D.
Professor, Sociology & Associate Dean
College of Sciences
University of Central Florida

P.O. Box 161997
Orlando, FL 32816-1997

Office: 407.823.6568
Jana.Jasinski@ucf.edu

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

NEW FORM – BEGINNING FALL 2015

Program Recommendation Form - ADDITIONS ONLY

This form is to be used to **ADD** degree programs, tracks, or certificate programs. If there are tracks being added to the program, one form may be used for both the program and the track(s).

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of items to be attached with completed form:

☑ Complete and current Graduate Catalog copy (www.graduatecatalog.ucf.edu), including description, curriculum, contact information, application requirements, and application deadlines.

☐ A list of faculty who will participate in the program, track or certificate and their credentials.

☐ If applicable, a written agreement from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate.

☐ Course Action Request forms, as needed.

☐ Library assessment of resources.

College/Unit(s) Submitting Proposal: College of Science

Proposed Effective Term/Year: Fall 2017

Unit(s) Housing Program: Department of Mathematics

Name of program, track and/or certificate: Financial Mathematics Track, Mathematics PhD Program

Please check all that apply: This action affects a: ☐ Program ☑ Track ☐ Certificate

DELIVERY: Program will be delivered: ☑ Face to Face ☐ Completely Online ☐ Mixed Delivery

Will the program be a **market tuition rate** program? ☐ Yes ☑ No

Brief description of program and rationale for the addition: **Do not add complete catalog copy here.**

The Financial Mathematics Track in the Mathematics PhD program is designed to prepare students for research and leadership positions in industry, government, non-governmental organizations, and academia requiring employment of financial mathematics.

Financial industry is an area of growth and opportunity for the US economy. It constantly calls for new quantitative models to understand and analyze the huge amounts of financial/economic data, which requires rigorous mathematical understanding.

This program is an important investment in the support of the growth of the finance industry in the State of Florida. In particular, it provides support for strategic job investment at the

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☑ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

Will students have the option to stay in their existing program, track, or certificate? ☑ Yes ☐ No

If yes, how will current students be impacted by the addition of a program, track or certificate?

Students in the current PhD program have the option to stay on the existing program and to select Financial Mathematics Track.

Future Students

Provide a statement of who is likely to enroll and why. Please state if there is licensure or certification that depends upon this education, etc. Also, complete the following table.

Students enrolled in the Mathematical Finance Track should have a strong mathematics background and high interest in mathematical finance.

No license or certification is needed for the admission of the Financial Mathematics track.

	Year 1	Year 2	Year 3
Headcount	5	10	10
SCHs	60	120	120

Indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

Modelers and Researcher in financial industry (such as bank, investment company), government, non-governmental organizations (such as IMF, World Bank), and academia.

Please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1	5	GTA/GRA, Math Dept.	1 (University Graduate Fellowship)	5	College of Graduate Studies
Year 2	10	GTA/GRA, Math Dept	1 (University Graduate Fellowship)	10	College of Graduate Studies
Year 3	10	GTA/GRA, Math Dept.	1 (University Graduate Fellowship)	10	College of Graduate Studies

Signature Page

Recommend Approval (all approval levels must be signed)

Department Chair /Director	(Print) Xin Li		(Signature) Xin Li	Date	1/24/2017
College Academic Standards	(Print) Sara L. Jaworski		(Signature)	Date	3/3/17
College Dean	(Print) M. Johnson		(Signature)	Date	2017-3-3
Graduate Council	(Print)		(Signature)	Date	
Graduate Dean	(Print)		(Signature)	Date	

Approval

Provost and Executive Vice President: _____ **Date** _____

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

Memo

To: Dr. Xin Li, Department Chair, Mathematics Department
Dr. Joseph Brennan, Associate Chair, Mathematics Department
Dr. Jana Jasinski, Associate Dean, College of Sciences
Mrs. Ying Zhang, Department Head, Acquisitions and Collections
Ms. Mary Page, Associate Director, Technical Services
Mr. Barry Baker, Director of Libraries
Dr. John Weishampel, Liaison, College of Graduate Studies
Dr. Elizabeth Klonoff, Vice President for Research & Dean, College of Graduate Studies

From: Sandy Avila, Interim Science Librarian

Subject: Library Evaluation of the Proposal to add a Master's Program and a Ph.D Program in Financial Mathematics in the Department of Mathematics in the College of Sciences

Date: March 20, 2017

When reviewing library support for a new Master's Program and Ph.D Program in the College of Sciences, we selected the following institutions for the comparison:

- Florida State University
- Carnegie Mellon University
- University of Miami
- North Carolina State University
- Boston University

Summary and projected Costs for New Library Resources:
In comparing with the library collections at the selected aspiring programs, UCF Libraries recommends the following with regard to databases: For the Master's track, no new databases are needed. However, for the Ph.D track, the doctoral students will need access to both CompuStat plus ThomsonOne at the very least. Wharton Research Data Services is preferred because it includes ComputStat and ThomsonOne plus it has additional resources that would be valuable. The UCF College of Business—Finance has paid for a license for CompuStat for use by its Business students. Your proposed track can decide at what level you will support your students and faculty. In addition, UCF Libraries will need to add some monographs to fill the gaps in collections. The total cost for library materials for the first year to begin the new Master's Program and Ph. D Program in Financial Mathematics is $24,447.00. For costs in subsequent years, see the chart below. After the five year period costs will continue so money will need to be added to the Library budget to cover those expenses, especially for database subscriptions.

In the unfortunate event library budget shortfalls occur, some existing resource subscriptions may be cut or scaled back.

Projected costs needed to acquire library materials to support the new Master's Program and Ph.D Program in Financial Mathematics

	2017	2018	2019	2020	2021	2022
Databases	$23,447.00	$46,849.00	$49,191.45	$51,651.02	$54,236.57	$56,948.40
Journals	$ 0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Books	$1000.00	$1000.00	$1000.00	$1000.00	$1000.00	$1000.00
Total	**$24,447.00**	**$47,849.00**	**$50,191.45**	**$52,651.02**	**$55,236.57**	**$57,948.40**

Comparative Analysis on key library resources supporting the new Master's Program and Ph.D Program in Financial Mathematics

Databases

Database Titles	UCF	FSU	CMU	UM	BU	NC State
ReferenceUSA			X		X	X
COMPUStat			X		X	X
ThomsonOne			X	X		X
Morningstar Investment Research Center				X		X
Standard and Poor's Net Advantage	X		X	X		X
MergentOnline	X	X	X	X	X	
Lexis Nexis Academic	X	X	X	X	X	X
MathSciNet	X	X	X	X	X	X
Directory of Open Access Journals (DOAJ)	X				X	
Business Source Premier	X	X		X	X	X
Vault Career Library	X		X			
ABI/Inform Complete	X	X	X	X	X	X
Science Direct	X	X	X	X	X	X
Web of Science	X	X	X	X	X	X
Academic Search Premier	X	X	X	X	X	X
Business Insights Essentials	X	X		X		
Business Economics and Theory	X					
JSTOR	X	X	X	X	X	X
Wharton Research Data Services					X	X

Databases: UCF Libraries' database list only lacks four databases held by some of the other institutions in our comparison. A description of the contents of each database follows below with associated pricing.

- COMPUStat
- ThomsonOne
- Morningstar Investment Research Center
- Wharton Research Data Services

COMPUStat is a database of financial, statistical and market information on active and inactive global companies throughout the world. The service began in 1962.
Cost: $8,000 additional to Business Department $40,000 annual subscription.

ThomsonOne provides access to financial data on public companies, as well as merger and acquisition information and market data. Users can search and screen to identify companies that meet specific investment criteria. Also contains Worldscope fundamental financial data for non-U.S. public companies.
Cost: $4,000/month, $48,000 yearly

Morningstar Investment Research Center is an interactive investment database with information on more than 30,000 stocks, mutual funds, and exchange-traded funds. It combines cutting-edge technology with Morningstar's investment know-how to give your patrons a one-stop investment site. Designed specifically for libraries, it provides independent analysis, industry information, stock charts, portfolio building tools, and investment education.
Cost: $10,295 for unlimited access for the year

Wharton Research Data Services provides comprehensive sources of financial, accounting, economic, management, marketing, banking, and insurance data. The Boston University subscription includes the following datasets:Audit Analytics, Compustat Global, Compustat North America, CRSP – Center for Research in Security Prices, CRSP – Mutual Fund, CUSIP Master File, Eventus, I/B/E/S from Thomson Reuters, Institutional Shareholder Services (formerly RiskMetrics), MSCI ESG KLD Stats, Thomson Reuters.

Cost: $23,447 for the first year at a 50% discount, $46,849 market price for subsequent years

The UCF Libraries recommends that we seriously look at Wharton Research Data Services as a comprehensive database that houses all the datasets we are missing from our current electronic resources. In comparison to other institutions, we are in otherwise good shape minus the one database that is comprehensive with regard to analytics and risk management. Since UCF will be supporting Ph.D level students, it is imperative that we are able to properly support them in their research as UCF works towards their preeminent public research institution status by 2020. The library resources are important to this endeavor. For a Master's Program we could do without this database, but because of the proposed doctorate program, UCF should subscribe to Wharton Research Data Services or CompuStat, and ThomsonOne.

Should major budget cuts occur, some databases and/or journals on this list could be cut.

Key Journals

Journal Titles	UCF	FSU	CMU	UM	BU	NC State
SIAM Journal of Financial Mathematics	X	X		X	X	X
Journal of Mathematical Finance	*			X	X	
Journal of Approximation theory and Applied Mathematics	*					X
Mathematics and Financial Economics	X	X	X	X	X	X
Revista de metodos cuantitativos para la economia y la empresa	X	X	X	X	X	X
Quantitative Finance	X	X			X	X
IMA Journal of Management Mathematics	X	X		X		X
Rect@: Revista electronica de comunicaciones y trabjajos de	*	X	X	X	X	

Journal Titles	UCF	FSU	CMU	UM	BU	NC State
ASEPUMA						
Applied Stochastic Models in Business and Industry	X	X	X	X	X	X
Applied Mathematical Finance	X	X	X	X	X	X
Mathematical Finance: An International Journal of Math, Stats, and Financial Theory	X	X	X	X	X	X
IMA Journal of Mathematics Applied in Business and Industry	X	X		X	X	X
Cuadernos del CIMBAGE	*	X	X	X	X	
International Journal of Theoretical and Applied Finance	X	X	X	X	X	X
Annals of Applied Probability	X	X	X	X	X	X
Finance and Stochastics	X	X	X		X	X
Journal of Modelling in Management	X	X	X	X	X	X
SIAM Journal of Numerical Analysis	X	X		X	X	X
Journal of Applied Mathematics	X	X	X	X	X	X
The Journal of Financial Engineering	X	X		X	X	X
Management Science and Financial Engineering	*	X	X	X	X	X
The Journal of Derivatives: A Publication of Institutional Investor, Inc.	X	X		X	X	X
International Journal of Stochastic Analysis	X	X	X	X	X	X
Journal of Applied Mathematics and Stochastic Analysis	X	X	X	X	X	X
International Journal of Computational Methods	X	X			X	
Communications in Numerical Methods in Engineering	X	X	X	X	X	X
International Journal of Engineering Mathematics	*	X	X	X	X	
Analysis and Applications	X	X		X	X	X
International Journal of Computational Engineering Science	X	X	X	X	X	X
Journal of Computational Engineering	X	X	X	X	X	
Journal of Engineering Mathematics	X	X	X	X	X	X
Journal of Financial Innovation	X	X	X	X	X	

Journals: In order to support the new Master's Program and Ph.D Program in Financial Mathematics, journal subscriptions to the following are suggested:

- Journal of Mathematical Finance * (available for free via http://www.scirp.org/journal/jmf/)

- Journal of Approximation Theory and Applied Mathematics * (available for free via DOAJ)
- Rect@ * (available for free; information from the journal website: http://www.revistarecta.com/
- Cuadernos del CIMBAGE * (available for free via DOAJ)
- Management Science and Financial Engineering * (available for free via their website: http://www.koreascience.or.kr/journal/AboutJournal.jsp?kojic=E1MSAQ
- International Journal of Engineering Mathematics * (available for free via their website: https://www.hindawi.com/journals/ijem/)

Below is an explanation of what each journal brings to the program with an outline of costs. In some cases the journals are available via Open Access channels and no cost to UCF is involved, although a formal record would need to be added to our library catalog.

Journal of Mathematical Finance aims at presenting the latest developments in pure and applied financial mathematics. It considers important theoretical, empirical and review papers in the following areas: financial engineering, financial statistics, pricing theory of securities and portfolio, quantitative economics, solutions to PDEs, stochastic optimization and control, and stochastic processes. The journal is available for free via the SCIRP website: http://www.scirp.org/journal/jmf/

Journal of Approximation Theory and Applied Mathematics is actually available for free via the following website: jatame.de/ . The journal began back in 2013 and focuses on the areas of approximation theory, with a focus on wavelengths, and applications in mathematics like numerical analysis, statistics, and financial mathematics. The resource is available for free via DOAJ- Directory of Open Access Journals.

Rect@ is a journal that publishes articles related to the theory and applications of Mathematics in general, as well as Statistics, and Informatics in the field of Economics and Business. The initial stand for R-evista, E-lectronic, of C-ommunications and T-rabajos of @SEPUMA. The journal is available for free from their website. http://www.revistarecta.com/

Cuadernos del CIMBAGE is a publication of the Center for Research in Blurred Methodologies applied to the Management and Economics of the Faculty of Economics of the University of Buenos Aires. The journal includes applications of logic and mathematics to management and economics issues, especially those related to the treatment of uncertainty using fuzzy set theory. It is aimed at researchers, academics and specialists in these areas. Its objective is to disseminate unpublished articles, technical reports, standards or specifications. The resources is available for free via DOAJ.

Management Science and Financial Engineering is a peer-reviewed English language journal that publishes scientific research and surveys on management science and financial engineering. This international journal aims at publishing high quality original works that have significant theoretical, methodological, empirical advances in management science and financial engineering as well as promoting collaboration from these cross-disciplinary fields to develop new technologies and applications in related areas. The journal is published biannually (May and Novemeber) and supported by the Korea Operations Research and Management Science Society (KORMS). The resource is available for free via their website: http://www.koreascience.or.kr/journal/AboutJournal.jsp?kojic=E1MSAQ

International Journal of Engineering Mathematics is a peer-reviewed, open access journal that publishes original research articles as well as review articles in all areas of engineering mathematics. The resource is available for free from their website: https://www.hindawi.com/journals/ijem/)

Cost: $0.00 since all are available via open access channels

Books

Subject Headings	**UCF**	**FSU**	**CMU**	**UM**	**BU**	**NC State**
Business Mathematics	558	586	169	581	140	487
Financial Engineering	75	42	38	72	80	143
Financial Risk Management	61	181	35	136	60	220
Stochastic Analysis	206	260	99	259	173	434
Stochastic Volatility Models	1	2	0	2	0	0
Mathematical statistics– data processing	198	138	108	137	99	458
Mathematics – economics	532	579	369	0	1	197
Finance – Mathematical Models	210	166	226	362	241	685
Applied Mathematics—numerical analysis	7	5	26	0	9	51
Asymptotic Methods	21	68	1	5	3	29
Statistical Modelling	1665	425	102	1	5	26
Finite Differences	123	102	12	85	29	251
Capital Market - Stability	48	1	198	117	0	2
Measure Theory	181	172	113	2	0	375
Monte Carlo Method	341	369	99	20	165	419
Ito Calculus	40	0	0	1	4	0
Corporations - Finance	852	769	0	17	516	1537
Statistical Theory	1106	684	69	9	314	994
Business- Mathematical Models	15	36	96	13	10	245
Derivative Securities - Prices-Mathematical Models	36	17	15	21	11	44
Total books	**6276**	**4602**	**1775**	**1840**	**1860**	**6597**

Books: The analysis of the book collection shows that UCF Libraries will need to add some books in order to support the new Master's Program and Ph.D Program in Financial Mathematics, adding new publications over the next 5 years. We currently compare very favorably in the area of books as we look at other institutions with similar programs. However, since we will be supporting Ph.D students, we do need to grow some subject areas to provide ample support to them. I suggest that the UCF Libraries purchase additional titles in the following subject areas in the first year and subsequent 5 years in order to build the collection:

Applied Mathematics—numerical analysis
Stochastic Volatility Models
Financial Risk Management
Business- Mathematical Models

Books total costs: $ 1000.00 for the first year + $1000.00 for the next 5 years (see Appendix 1 for a list of titles and pricing)

Title: NUMERICAL METHODS IN COMPUTATIONAL MECHANICS. **ISBN:** 9781498746755
Author: GHABOUSSI, J
Publisher: SPON PRESS **Pub Year:** 2017 **Binding:** Cloth
LC Class: TA335.G43 2017 **Content Level:** ADV-AC **YBP Select:** Supplementary
Language: English
US List: 99.95 USD **US Status:** In Stock **Rush:** Available
UK List: 63.99 GBP **UK Status:** In Stock
Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/2E) GobiTween (12 Slips)
ProtoView

Title: 2D AND 3D IMAGE ANALYSIS BY MOMENTS. **ISBN:** 9781119039358
Author: FLUSSER, JAN
Publisher: JOHN WILEY **Pub Year:** 2017 **Binding:** Cloth
LC Class: TA1637.F58 2016 **Content Level:** ADV-AC **YBP Select:** Research-Recommended
Language: English
US List: 130.00 USD **US Status:** Orders accepted
Also Available From: GOBI BookZone
UK List: 81.50 GBP **UK Status:** In Stock
Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/3E) GobiTween (1 Book/19 Slips)

Title: SOLVING FAULT DIAGNOSIS PROBLEMS: LINEAR SYNTHESIS TECHNIQUES. **ISBN:** 9783319515588
Author: VARGA, ANDREAS
Publisher: SPRINGER **Pub Year:** 2017 **Binding:** Cloth
LC Class: T
Language: English
US List: 179.00 USD **US Status:** Not yet published
UK List: Not Known
Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/1E) GobiTween (1 Book)

Title: FAULT DIAGNOSIS AND FAULT-TOLERANT CONTROL BASED ON ADAPTIVE CONTROL APPROACH. **ISBN:** 9783319525297
Author: SHEN, QIKUN
Publisher: SPRINGER **Pub Year:** 2017 **Binding:** Cloth
LC Class: T
Series Title: STUDIES IN SYSTEMS, DECISION AND CONTROL. **Series Volume:** 91 **Series Format:** Print
Language: English
US List: 129.00 USD **US Status:** In Stock
UK List: Not Known
Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/1E) GobiTween (1 Book)

Title: STOCHASTIC MODELS, STATISTICS AND THEIR APPLICATIONS **ISBN:** 9783319138800
Author: WORKSHOP ON STOCHASTIC MODELS, STATISTICS AND THEIR APPLICATIONS (12TH: 2015: WROCLAW, POLAND)
Editor: ANSGAR STELAND
Publisher: SPRINGER **Pub Year:** 2015 **Binding:** Cloth
LC Class: QA274.2.W67 2015 **Content Level:** PROF **YBP Select:** Specialized
Series Title: SPRINGER PROCEEDINGS IN MATHEMATICS & STATISTICS. **Series Volume:** 122 **Series Format:** Print
Language: English
US List: 169.00 USD **US Status:** In Stock
UK List: Not Known
Added To List: 3/21/2017
Library Note: Add...
alt-ed eCollection invoiced (2/11/2015) alternate editions (1P/1E) GobiTween (3 Books/11 Slips)

Title: UNCERTAINTY QUANTIFICATION AND STOCHASTIC MODELING WITH MATLAB. **ISBN:** 9781785480058
Author: CURSI, EDUARDO SOUZA DE
Publisher: ELSEVIER **Pub Year:** 2015 **Binding:** Cloth
LC Class: QA274.2 **Content Level:** ADV-AC **YBP Select:** Research-Recommended
Language: English
US List: 185.00 USD **US Status:** In Stock
UK List: 115.00 GBP **UK Status:** In Stock
Added To List: 3/21/2017
Library Note: Add...
slip sent (8/5/2015) alternate editions (1P/1E) GobiTween (1 Book/12 Slips)
ProtoView

Title: STOCHASTIC MODELING FOR MEDICAL IMAGE ANALYSIS. **ISBN:** 9781466599086
Author: EL-BAZ, AYMAN S
Publisher: CRC PRESS **Pub Year:** 2016 **Binding:** eBook
LC Class: RC78.7.D53 **Content Level:** ADV-AC **YBP Select:** Research-Recommended
Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+CRC Press	Multi-user		285.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 4/16/2015			**Handled On Approval YBP-US:** 2/3/2016			
eCollections: BIOMEDICALSCIENCENETBASE; BIOSCIENCENETBASE; PHYSICSNETBASE; SCI-TECHNETBASE; STMNETBASE;						
+EBL	1 User		189.95 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 11/24/2015						
+EBL	3 User		237.44 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 11/24/2015						
+EBL	Non-Linear Lending™	Yes	284.93 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 11/24/2015			**Handled On Approval YBP-US:** 2/10/2016			
+ebrary	3 User		237.44 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 11/30/2015						
+ebrary	Single User Option (SUPO)		189.95 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 11/30/2015			**Handled On Approval YBP-US:** 2/3/2016			
+EBSCOhost	1 User		189.95 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 12/3/2015			**Handled On Approval YBP-US:** 2/10/2016			
+EBSCOhost	3 User		237.44 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 12/3/2015						
+EBSCOhost	Concurrent Access		284.93 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 5/20/2016						

Added To List: 3/21/2017
Library Note: Add...
alternate editions (1P/1E) GobiTween (6 Slips)

Title: CHANGE OF TIME AND CHANGE OF MEASURE. **ISBN:** 9789814678582

Author: BARNDORFF-NIELSEN, O. E. (OLE E.)

Publisher: WORLD SCIENTIFIC **Pub Year:** 2015 **Binding:** Cloth

LC Class: QA274.28.B37 2015 **Content Level:** ADV-AC **YBP Select:** Supplementary **Edition:** 2ND ED.

Series Title: ADVANCED SERIES ON STATISTICAL SCIENCE & APPLIED PROBABILITY. **Series Volume:** 21 **Series Format:** Print

Language: English

US List: 68.00 USD **US Status:** In Stock

UK List: 56.00 GBP **UK Status:** In Stock

Added To List: 3/21/2017

Library Note: Add...

GobiTween (2 Books/8 Slips)
ProtoView

Title: STOCHASTIC CALCULUS FOR QUANTITATIVE FINANCE. **ISBN:** 9780081004760

Author: GUSHCHIN, ALEXANDER A

Publisher: ELSEVIER **Pub Year:** 2015 **Binding:** eBook

LC Class: QA274 **Content Level:** ADV-AC **YBP Select:** Research-Recommended

Series Title: MATHEMATICS AND STATISTICS SERIES. **Series Format:** Print

Series Title: OPTIMIZATION IN INSURANCE AND FINANCE SET. **Series Format:** Print

Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+EBL	1 User		126.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/5/2015						
+EBL	3 User		157.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 2/10/2017						
+EBL	Non-Linear Lending™	Yes	189.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 2/13/2017						
+EBL	Unlimited	Yes	189.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/28/2015			**Handled On Approval YBP-US:** 10/21/2015			
+ebrary	Multiple User Option (MUPO)		189.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/31/2015						
+ebrary	Single User Option (SUPO)		126.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 8/31/2015			**Handled On Approval YBP-US:** 10/21/2015			
+EBSCOhost	1 User		126.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/28/2015			**Handled On Approval YBP-US:** 10/21/2015			
+EBSCOhost	3 User		157.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/31/2015						
+EBSCOhost	Unlimited User		189.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/31/2015						
+Elsevier ScienceDirect	Multiple User Access		165.00 USD	Available	Contract on file	
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/12/2015			**Handled On Approval YBP-US:** 11/11/2015			

Added To List: 3/21/2017

Library Note: Add...

alt-ed slip sent (11/11/2015) alternate editions (1P/1E) GobiTween (4 Books/12 Slips)

Title: STOCHASTIC MODELING. **ISBN:** 9783319500379
Author: LANCHIER, NICOLAS
Publisher: SPRINGER **Pub Year:** 2017 **Binding:** Paper
LC Class: QA274.2.L36 2017 **Content Level:** ADV-AC **YBP Select:** Supplementary
Series Title: UNIVERSITEXT. **Series Format:** Print
Language: English
US List: 79.99 USD **US Status:** In Stock
UK List: 52.99 GBP **UK Status:** Not yet published
Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (2 Books/5 Slips)

Title: MARKET RISK ANALYSIS; V. III: PRICING, HEDGING AND TRADING FINANCIAL INSTRUMENTS. **ISBN:** 9780470772812
Author: ALEXANDER, CAROL
Publisher: JOHN WILEY **Pub Year:** 2008 **Binding:** eBook
LC Class: HG106 **Content Level:** ADV-AC **YBP Select:** Supplementary
Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+EBL	1 User		125.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/1/2015						
+EBL	3 User		187.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/1/2015						
+EBL	Non-Linear Lending™	Yes	187.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 11/6/2008			**Handled On Approval YBP-US:** 11/12/2008			
+ebrary	3 User		187.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 3/4/2013						
eCollections: ACADEMIC COMPLETE; F07 BUSINESS;						
+ebrary	Single User Option (SUPO)		125.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 4/24/2009			**Handled On Approval YBP-US:** 4/29/2009			
eCollections: ACADEMIC COMPLETE; F07 BUSINESS;						
+EBSCOhost	1 User		125.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 2/2/2009			**Handled On Approval YBP-US:** 2/25/2009			
+EBSCOhost	3 User		187.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/30/2012						

Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (1 Book/10 Slips)

Title: MARKET RISK ANALYSIS; V. I: QUANTITATIVE METHODS IN FINANCE. **ISBN:** 9780470771020
Author: ALEXANDER, CAROL
Publisher: JOHN WILEY **Pub Year:** 2008 **Binding:** eBook
LC Class: HG106 **Content Level:** ADV-AC **YBP Select:** Supplementary
Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+EBL	1 User		85.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/1/2015						
+EBL	3 User		127.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 10/1/2015						
+EBL	Non-Linear Lending™	Yes	127.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 7/26/2010			**Handled On Approval YBP-US:** 8/4/2010			
+ebrary	3 User		127.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 3/4/2013						
eCollections: ACADEMIC COMPLETE; F07 BUSINESS;						
+ebrary	Single User Option (SUPO)		85.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 6/8/2009			**Handled On Approval YBP-US:** 6/17/2009			
eCollections: ACADEMIC COMPLETE; F07 BUSINESS;						
+EBSCOhost	1 User		85.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/11/2010			**Handled On Approval YBP-US:** 8/18/2010			
+EBSCOhost	3 User		127.50 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/30/2012						

Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (1 Book/4 Slips)

Title: STOCHASTIC CALCULUS AND FINANCIAL APPLICATIONS. **ISBN:** 9780387950167
Author: STEELE, J. MICHAEL
Publisher: SPRINGER-VERLAG **Pub Year:** 2001 **Binding:** Cloth
LC Class: QA274.2.S74 2000 **Content Level:** ADV-AC
Series Title: PROBABILITY THEORY AND STOCHASTIC MODELLING. **Series Volume:** 45 **Series Format:** Print
Language: English
US List: 99.00 USD **US Status:** Out of print. Sourced to an out-of-print supplier
Also Available From: GOBI BookZone NON-RETURN/NON-CANCEL YBP-US
UK List: 66.99 GBP **UK Status:** Import Only
Added To List: 3/21/2017
Library Note: Add...

GobiTween (1 Book)

Title: STOCHASTIC PROCESSES WITH APPLICATIONS TO FINANCE. **ISBN:** 9781584882244
Author: KIJIMA, MASAAKI, 1957-
Publisher: CHAPMAN & HALL CRC **Pub Year:** 2003 **Binding:** Cloth
LC Class: QA274.K554 2002 **Content Level:** ADV-AC
Language: English
US List: 94.95 USD **US Status:** Out of print. Sourced to an out-of-print supplier
NON-RETURN/NON-CANCEL YBP-US
UK List: 73.99 GBP **UK Status:** Out of print. Sourced to an out-of-print supplier
Added To List: 3/21/2017
Library Note: Add...

GobiTween
ProtoView

Title: QUEUEING MODELS IN INDUSTRY AND BUSINESS. **ISBN:** 9781626188891
Author: HAGHIGHI, ALIAKBAR MONTAZER
Publisher: NOVA SCIENCE **Pub Year:** 2014 **Binding:** Cloth
LC Class: QA274.8.H34 2013 **Content Level:** ADV-AC **YBP Select:** Supplementary **Edition:** 2ND ED.
Series Title: BUSINESS ISSUES, COMPETITION AND ENTREPRENEURSHIP. **Series Format:** Print
Language: English
US List: 150.00 USD **US Status:** In Stock
UK List: 124.99 GBP **UK Status:** Orders accepted
Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (1 Book/5 Slips)

Title: QUEUEING MODELS IN INDUSTRY AND BUSINESS. **ISBN:** 9781628080865
Author: HAGHIGHI, ALIAKBAR MONTAZER
Publisher: NOVA SCIENCE **Pub Year:** 2014 **Binding:** eBook
LC Class: QA274.8.H34 2013 **Content Level:** ADV-AC **YBP Select:** Supplementary **Edition:** 2ND ED.
Series Title: BUSINESS ISSUES, COMPETITION AND ENTREPRENEURSHIP. **Series Format:** Print
Language: English

NON-RETURN/NON-CANCEL YBP

Supplier	Purchase Option	Library DDA	List Price	Status	Library Availability	Preview
+EBL	1 User		150.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 12/8/2015						
+EBL	3 User		225.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/12/2015						
+EBL	Unlimited		300.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 8/12/2015						
+ebrary	3 User		225.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 4/29/2014						
+ebrary	Multiple User Option (MUPO)		225.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 1/14/2014						
+ebrary	Single User Option (SUPO)		150.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** Yes			
Date Added: 6/18/2013			**Handled On Approval YBP-US:** 3/26/2014			
+EBSCOhost	1 User		150.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 1/7/2014			**Handled On Approval YBP-US:** 3/26/2014			
+EBSCOhost	3 User		225.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 1/7/2014						
+EBSCOhost	Concurrent Access		300.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 12/2/2016						
+EBSCOhost	Unlimited User		300.00 USD	Available	Contract on file	Preview
Downloadable: Yes			**Available To Consortia:** No			
Date Added: 1/7/2014						

Added To List: 3/21/2017
Library Note: Add...

alternate editions (1P/1E) GobiTween (1 Book/5 Slips)

Mathematics PhD

Financial Mathematics Track

PROGRAM DESCRIPTION

The Financial Mathematics track in the Mathematics PhD program is designed to prepare students for research and leadership positions in industry, government, non-governmental organizations, and academia requiring employment of financial mathematics.

CURRICULUM

The Mathematics PhD program consists of at least 75 credit hours of course work beyond the bachelor's degree, of which a minimum of 48 hours of formal course work, exclusive of independent study. The program requires 36 credit hours of core courses, and 15 credit hours of dissertation research (7980).

Total Credit Hours Required:

75 Credit Hours Minimum beyond the Bachelor's Degree

Required Courses—36 Credit Hours

The remaining credit hours consist of additional dissertation research (7980 or 7919), at least 12 credit hours of regular classroom elective courses, and at most 12 credit hours of independent study or independent directed research. Students who pass the qualifying examination may substitute some of the core courses at the approval of the adviser and the graduate program director.

All students are required to complete the following courses with grade of "B" or better.

- MAA 5228 Analysis I (3 credit hours)
- MAA 6229 Analysis II (3 credit hours)
- MAT 5712 Scientific Computing (3 credit hours)
- MAP 5XXX Differential Equations for Financial Mathematics (3 credit hours)
- MAP 5XXX Computational Methods for Financial Mathematics I (3 credit hours)
- MAP 5XXX Financial Mathematics I (3 credit hours)
- MAP 6385 Applied Numerical Mathematics (3 credit hours)
- MAP 6XXX Financial Mathematics II (3 credit hours)
- MAP 6XXX Computational Methods for Financial Mathematics II (3 credit hours)
- MAP 6XXX Risk Management for Financial Mathematics (3 credit hours)
- MAS 5145 Advanced Linear Algebra and Matrix Theory (3 credit hours)
- STA 6857 Statistical Inference / Time Series in Financial Applications (3 credit hours)

Elective Courses—24 Credit Hours

Elective courses require the approval of the adviser and the graduate program director; up to 12 credit hours of elective courses may be taken outside the department. At least one-half of the program courses must be taken at the 6000 level. At least 12 hours of elective course work must be formal course work, exclusive of independent study.

Electives are chosen in consultation with the student's advisory committee and may be chosen from the suggested options: Discrete Mathematics, General Applied Mathematics, Mathematical Computer Tomography, Image Processing and Computer Graphics, Mathematical Finance, Mathematical Optics, Mathematical Physics, Pure Mathematics, Rational Mechanics, Signal Analysis, and Mathematical Statistics. A list of elective course options can be obtained from the graduate program director.

Courses that are taken outside the Mathematics department must be approved by both the adviser and graduate program director. These courses are selected in consultation with the student's advisory committee.

Dissertation—15 Credit Hours Minimum

- MAP 7980 Dissertation Research (15 credit hours minimum)

After passing the candidacy examination and meeting the other requirements that are required for admission to candidacy, the student can register for Doctoral Dissertation (MAP 7980). A minimum of 15 Doctoral Dissertation credit hours are required for the degree.

Qualifying Examination

The qualifying/comprehensive examination is based on the core course work. To continue in the PhD program students must pass the examination at the PhD level. Two attempts are permitted. The examination will be administered twice a year: one in the Fall semester and the other in the Spring semester. To take the examination, students must have earned a "B" or better in each core course, must have a minimum grade point average of 3.0 (out of 4.0) in the program, or must obtain permission from the graduate program director. Students will normally take the examination after the first year and are expected to have passed it by the end of the second year of study unless a written request for a postponement has been approved by the Graduate Committee at least two months before the examination date. The student must pass the Qualifying Examination in at most two attempts.

It is strongly recommended that the student select a dissertation adviser by the completion of 18 credit hours of course work, and it is strongly recommended that the student works with the dissertation adviser to form a dissertation committee within two semesters of passing the Qualifying Examination.

Candidacy Examination

The Candidacy Examination consists of a written examination based on the materials from two selected two-semester sequence courses taken by the students. A committee formed or selected by the Graduate Committee or the graduate program director is responsible for preparing and grading the written examinations.

Each sequence that is selected for the candidacy examination must be approved by the dissertation adviser, the dissertation committee, and the graduate program director. Students in the Mathematical Finance Track will ordinarily select one of the sequences for their candidacy examination to be MAP 5XXX/MAP 6XXX Mathematical Finance I-II.

The Candidacy Examination can be attempted after passing the qualifying examination. The Candidacy Examination must be completed within three years after passing the qualifying examination. A student must successfully pass the Candidacy Examination within at most two attempts.

Admission to Candidacy

The following are required to be admitted to candidacy and enroll in dissertation hours:

- Completion of all course work, except for dissertation hours.
- Successful completion of the candidacy examination.
- The dissertation advisory committee is formed, consisting of approved graduate faculty and graduate faculty scholars.
- Submittal of an approved program of study.

Dissertation Proposal Examination

After passing the candidacy examination, the student will prepare a dissertation proposal and orally present it to the dissertation advisory committee for approval. The proposal will include a description of the research performed to date and an agenda for the research planned to be completed for the dissertation. In addition to standards of correctness, indicating a suitable level of mastery of the material of the area of the dissertation, and suitability of the proposed dissertation topic, the presentation must meet current standards for professional presentations within the discipline of mathematics. For the successful completion of the Dissertation Proposal Examination the presentation must be judged as passing the requirements for the examination by the majority of the dissertation committee. This exam must be passed within 18 months of passing the candidacy examination and not later than the end of the sixth year of graduate study. A candidate must pass this examination within at most two attempts.

Dissertation Defense

Upon completion of a student's research, the student's committee schedules an oral defense of the dissertation. Most students complete the program within five years after obtaining their bachelor's degree. Students are expected to complete the dissertation in no more than seven years from the date of admission to the program.

Independent Learning

The required 15 credit hours of dissertation will provide ample opportunities for students to gain the independent learning experience through studying published research papers and deriving, on their own, new and meaningful research results.

Application Requirements

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions section of the Graduate Catalog. Applicants must apply online. All requested materials must be submitted by the established deadline.

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- One official transcript (in a sealed envelope) from each college/university attended.
- Bachelor's degree in related field.

- Official, competitive GRE score, taken in the last five years.
- Three letters of recommendation.
- Goal statement.
- Résumé.

Meeting minimum UCF admission criteria does not guarantee program admission. Final admission is based on evaluation of the applicant's abilities, past performance, recommendations, match of the program and faculty expertise to the applicant's career/academic goals, and the applicant's potential for completing the degree.

Transfer of credits from other programs will be considered on a course-by-course basis. Additionally, students entering the graduate program with regular status are assumed to have a working knowledge of undergraduate calculus, differential equations, linear algebra (or matrix theory), boundary value problems, statistics, computer programming, and maturity in the language of advanced calculus (at the level of MAA 4226). Students who are not adequately prepared in one or more of these areas can select appropriate courses from the undergraduate curriculum to make up such deficiencies. Such courses, unless specially approved, do not count toward the graduate degree.

Application Deadlines

Mathematics PhD	***Fall Priority**	**Fall**	**Spring**	**Summer**
Domestic Applicants	Jan 15	Jul 15	Dec 1	Apr 15
International Applicants	Jan 15	Jan 15	Jul 1	Nov 1
International Transfer Applicants	Jan 15	Mar 1	Sep 1	Dec 15

*Applicants who plan to enroll full time in a degree program and who wish to be considered for university fellowships or assistantships should apply by the Fall Priority date.

FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see the College of Graduate Studies Funding website, which describes the types of financial assistance available at UCF and provides general guidance in planning your graduate finances. The Financial Information section of the Graduate Catalog is another key resource.

Fellowships

Fellowships are awarded based on academic merit to highly qualified students. They are paid to students through the Office of Student Financial Assistance, based on instructions provided by the College of Graduate Studies. Fellowships are given to support a student's graduate study and do not have a work obligation. For more information, see UCF Graduate Fellowships, which includes descriptions of university fellowships and what you should do to be considered for a fellowship.

The department offers over 20 Graduate Teaching Assistantships every year on a competitive basis. A few Graduate Research Assistantships are also available for qualified students.

University of Central Florida

Department of Statistics

November 21, 2016

Xin Li, Ph.D.
Chair, Department of Mathematics
University of Central Florida
4393 Andromeda Loop N
Orlando, FL 32816

Re: Mathematical Finance

Dear Dr. Li,

The Department of Statistics welcomes the Department of Mathematics to add new tracks to their graduate program in the area of Mathematical Finance. In order to support these new tracks the Department of Mathematics are creating a family of new courses:

- ☐ MAP 5XXX Differential Equations for Financial Mathematics (3 credit hours)
- ☐ MAP 5XXX Computational Methods for Financial Mathematics I (3 credit hours)
- ☐ MAP 5XXX Financial Mathematics I (3 credit hours)
- ☐ MAP 5XXX Proseminar in Financial Mathematics (0 credit hours)
- ☐ MAP 6XXX Financial Mathematics II (3 credit hours)
- ☐ MAP 6XXX Computational Methods for Financial Mathematics II (3 credit hours)
- ☐ MAP 6XXX Risk Management for Financial Mathematics (3 credit hours)
- ☐ MAP 6XXX Seminar in Financial Mathematics (0 credit hours)

The Department of Statistics is happy to join with the Department of Mathematics in offering this program. Students in the program will take STA 6857 Applied Time Series as a required course in their program and may take one or more of STA 5703 Data Mining Technology I and STA 5825 Stochastic Processes and Applied Probability Theory as part of their program's restricted electives.

The Department of Statistics looks forward to continued collaboration with the Department of Mathematics to provide the students of UCF the best programs and opportunities possible.

Sincerely,

Shunpu Zhang, Ph.D.
Chair and Professor
Department of Statistics
University of Central Florida

Orlando, Florida 32816-2370 • (407) 823-1566 • Shunpu.Zhang@ucf.edu

University of Central Florida

Department of Finance

November 10, 2016

Professor Joseph Brennan
Chair,
Department of Mathematics
University of Central Florida.

Dear Professor Brennan:

You have informed me that the Department of Mathematics is creating a new track in two of your graduate degree programs: the Master of Science in Mathematical Sciences and the Doctor of Philosophy in Mathematics. These new tracks are in in the area of Financial Mathematics. In order to support these new tracks the Department of Mathematics is creating a family of new courses:

- MAP 5XXX Differential Equations for Financial Mathematics (3 credit hours)
- MAP 5XXX Computational Methods for Financial Mathematics I (3 credit hours)
- MAP 5XXX Financial Mathematics I (3 credit hours)
- MAP 5XXX Proseminar in Financial Mathematics (0 credit hours)
- MAP 6XXX Financial Mathematics II (3 credit hours)
- MAP 6XXX Computational Methods for Financial Mathematics II (3 credit hours)
- MAP 6XXX Risk Management for Financial Mathematics (3 credit hours)
- MAP 6XXX Seminar in Financial Mathematics (0 credit hours)

These courses promise to offer students at UCF the opportunity to acquire technical capability to use mathematics in the financial industry, an area of growth and opportunity for our students. It is to be hoped that students studying in the graduate programs of the Department of Finance and the Dr. P. Phillips School of Real Estate will be able to avail themselves of the opportunities presented by these course offerings.

Our department was approached as a potential partner in this program and we would have liked to participate in bringing this program to UCF. With deep regrets, I must say that due to very limited resources we are unable to participate in this program at this time.

It has been indicated that our participation would be welcomed, should the resources necessary to be a full participant arise in the future. I hope that that day will come. Until then, I wish the program the best of success.

Sincerely,

Ajai Singh
SunTrust Eminent Scholar Chair of Banking;
Professor & Chair, Department of Finance
& Director, Dr. P. Phillips School of Real Estate

College of Business Administration
P.O. Box 161400 • Orlando, FL 32816-1400 • (407) 823-3575 • Fax: (407) 823-6676

Tonya Walker

From: Jana Jasinski
Sent: Friday, January 27, 2017 4:46 PM
To: Tonya Walker
Subject: FW: Financial Math Track in the Mathematics PhD program

Tonya

Can you add this to the documentation for the Financial Math track.

Thanks!

Jana

Jana L. Jasinski, Ph.D.
Professor, Sociology & Associate Dean
College of Sciences
University of Central Florida

P.O. Box 161997
Orlando, FL 32816-1997

Office: 407.823.6568
Jana.Jasinski@ucf.edu

From: Ajai Singh
Sent: Friday, January 27, 2017 4:10 PM
To: Jana Jasinski <Jana.Jasinski@ucf.edu>
Cc: Taylor Ellis <tellis@bus.ucf.edu>
Subject: RE: Financial Math Track in the Mathematics PhD program

Dear Dr. Jasinski:

My Department does not have any objection to the doctoral program in Mathematics moving forward.

Thanks for checking with us.

Best,
Ajai

Ajai Singh
SunTrust Eminent Scholar Chair of Banking
Professor and Chair, Department of Finance
Director, Dr. P. Phillips School of Real Estate
College of Business Administration
University of Central Florida
12744 Pegasus Drive
Orlando, FL 32816-1400

PH: 407-823-0761
FAX: 407-823-6676
aks@ucf.edu

From: Jana Jasinski
Sent: Friday, January 27, 2017 1:45 PM
To: Ajai Singh <aks@ucf.edu>
Cc: Taylor Ellis <tellis@bus.ucf.edu>
Subject: Financial Math Track in the Mathematics PhD program

Good afternoon Dr. Singh,

In reviewing the materials for the proposed track in financial math, which is part of the doctoral program in Mathematics, I see that you have written a letter indicating that you will not be able to participate in this program track. I am writing to confirm, however, that you do not have any concerns with the program moving forward with this track. Please let me know whether you support the department of mathematics in their efforts to add this track to their program.

Best,

Dr. Jasinski

Jana L. Jasinski, Ph.D.
Professor, Sociology & Associate Dean
College of Sciences
University of Central Florida

P.O. Box 161997
Orlando, FL 32816-1997

Office: 407.823.6568
Jana.Jasinski@ucf.edu

University of Central Florida

Graduate Split-Level Class Action Request Form

The Graduate Council Curriculum Committee discourages the establishment of split-level classes. Graduate students are entitled to more challenging content, instruction, and assessment, which are difficult to provide in classes offered to undergraduates as well. Circumstances may compel a unit to propose a split-level class. In these cases, the proposal should indicate the reasons a split-level class is necessary and what long-term measures are being taken to provide undergraduates and graduates with appropriate coursework. In addition, it is important to differentiate each of the undergraduate and graduate course elements. To provide reviewers with a clear delineation of the differences between the 4000 and 5000 courses, Summary Tables 1 and 2 should be completed.

Please submit this form along with the completed Course Action Request (CAR) form. Include both the 4000 syllabus and the 5000 syllabus. The 5000 syllabus should bold any additions or differences.

What is the rationale for the split-level class?

The geosciences are underrepresented in UCF's curriculum. Efforts are being made to develop new geoscience courses to offer both undergraduate and graduate students. In Florida, geoscience inevitably involves involves the ocean, which is the topic for this new course. In addition, a faculty cluster in coastal systems, headed by Dr. Graham worthy of the Biology Department, is well underway. The cluster includes faculty from COS, CECS, COBA, and COHPA, and is intended to enhance both graduate and undergraduate curricula in coastal marine science. This course is also part of that effort. For the first few years, enrollments will be relatively low, as both efforts develop. A split-level structure will enable the course to be offered a few times, after which, if enrollments rise, two separate courses will evolve. The interdisciplinary nature of coastal science will result in a mix of backgrounds and interests among the students in the proposed course. Students will come from a range of disciplines, primarily from the sciences and engineering. The course will provide important core knowledge for future marine science professionals and researchers. Graduate students at the early stage of their academic careers and advanced undergraduates will benefit equally from the variety of interests represented among the participants.

Table 1— List any **course objectives or content:**

1) that is common to both the undergraduate and graduate syllabi but have been differentiated for undergraduate and graduate students. For example, an objective for undergraduates may require identification of a concept where the graduate objective may require application;

or

2) in cases where entirely new objectives or content have been added to the existing undergraduate objectives and content, in the 5000 course column list any course elements that the graduate syllabus requires in addition to the elements of the undergraduate syllabus. For example, if there are 3 course readings in the undergraduate syllabus and a 4th reading was added for the graduate syllabus, list it in the 5000 course column and leave the 4000 course column blank.

Table 1 Differences Between 4000 and 5000 Course Objectives and Content

Course Element	4000 Course	5000 Course
Recent professional journal paper readings	Each undergraduate student will abstract and present one journal paper abstract during th	Each graduate student will abstract and present two journal paper abstracts during the semester.
Term Project		Graduate students will complete a term project, as described in the syllabus

Table 2—List different or additional **assessment** elements (course assignments and tests that count toward the grade). For example, if an undergraduate course assignment that requires students to read an article and write a reflection has been expanded to require graduate students to read a book and present it to the class, the two versions of this assignment would be contrasted in this table. If a third exam was added for graduate students, list it in the 5000 column.

Table 2 Differences Between 4000 and 5000 Course Assessment		
Course Element	**4000 Course Assessment and % of grade**	**5000 Course Assessment and % of grade**
Midterm exam	35% of undergraduate grade	30% of graduate grade
Final exam	35% of undergraduate grade	30% of graduate grade
Journal paper abstracts	15% of undergraduate grade	20% of graduate grade
Term project	(none)	10% of graduate grade
Problem sets and class participation	15% of undergraduate grade	10% of graduate grade

For more information, contact Dr. John Weishampel, Associate Dean, in the College of Graduate Studies.

Print Form

UCF

UNDERGRADUATE COURSE ACTION REQUEST FORM
(Departments: Forward form to your college dean's office)

◉ New Course ○ Course Revision ○ Course Deletion

College Sciences Dept. Physics Course Contact Person Dr. Joseph F. Donoghue Phone 407-823-0631

Academic Affairs approved Instructor Dr. Joseph F. Donoghue Contact's email joseph.donoghue@ucf.edu

	Prefix e.g. BSC	# e.g. 1020C	Course Title	Credit e.g. 4(3,2)
New Course: List new course's data	GLY	4xxx	Marine Geoscience	3(3,0)
Revision: List Prefix, #, and changed items			Only enter title if changed	Only if changed
Deletion: List Prefix & #			Title not needed	

Important: New courses and course revisions must be accompanied by an electronic course syllabus (Word or RTF file)

For new courses, title revisions, or changed abbreviation:

30 Character Abbreviation Marine Geoscience

For new courses or revised prerequisites: Note: All upper division courses must have prerequisites.
Prerequisites &/or Co-requisites (CR:):

Junior standing or permission of instructor

For new courses or revised descriptions: Note: 25 word limit.
Course Description: Examination of the physical processes operating in the world ocean; marine tectonics; ocean history; marine sediments; ocean circulation; marine energy; sea-level change; marine research methods.

For new courses, or courses being revised: (If Course Revision, leave blank when there is no change):

Will new/revised course be offered in the next 3 terms? **Yes** ◉ **No** ○ Term Fall '17 (so that a special topics version will be made available)

New or revised Materials & Supply Fees? **Yes** ○ **No** ◉ (If yes, also complete the Materials and Supply Fee Request form)

Is course to be repeatable for credit? **Yes** ○ **No** ◉ (Syllabus must explain how the content changes when repeated.)
If repeatable, specify # of times accepted in major: Unlimited ☐ **or** a maximum of ___; Only if content is different ☐
(If content must be different to be accepted, the department must monitor students' audits to ensure compliance.)

Course to be graded S/U? **Yes** ○ **No** ◉ Graded NC? **Yes** ○ **No** ◉

Source of students: Who will take the course? Science/Engineering majors Estimated annual enrollment? 20

Discussion: Possible content overlap with other departments or colleges must be discussed with appropriate parties. Provide evidence of discussions you have had.

Rationale: How does the addition or revision of this course contribute to the university's curriculum?
There is increasing interest in enhancing UCF's geoscience offerings, and in particular those related to marine science. This course represents one of the fundamental topics in geoscience and should be of interest to many students in the physical and life sciences and engineering.

Term of offering on Main campus: (Mark all terms that apply, or mark Occasional). Students will expect this to be offered when indicated.

☒ Odd Fall ☐ Odd Spring ☐ Odd Summer
☐ Even Fall ☐ Even Spring ☐ Even Summer ☐ Occasional

For Course Deletions:
Rationale: Why delete this course?

Impact: If this course is required in any UCF major or is a prerequisite for any UCF course, attach evidence of discussions you have had.

Recommending Authority	Approved	Denied	Signature	Date
Department Chair	✓			02/07/17
College Academic Standards				
College Dean				
UCRC			Recommendation entered in the 4D CatalogDB	
Vice Provost and Dean of Undergraduate Studies			Approvals entered in the 4D CatalogDB	

SYLLABUS **Fall 20__**

GLY-4___
Marine Geoscience
M/W 3:30 – 4:45 pm

Prof. Joseph F. Donoghue
joseph.donoghue@ucf.edu
PSB 463, 407-823-0631
Hours: Fri., 1:30 – 4:00 pm,
or by appointment

Course Description: *Marine Geoscience (3).* Examination of the physical processes operating in the world ocean; marine tectonics, ocean history; marine sediments; ocean circulation; marine energy; sea-level change; marine research methods.

Learning Objectives: The objectives of this course are: to develop the critical thinking skills necessary to understand the physical basis, dynamics and history of the ocean basins; to become aware of recent topics in marine geoscience; to provide an introduction to paleoceanography; and to develop familiarization with research methods in marine geoscience.

Readings: Many readings will be taken from a text: Seibold, E., and Berger, W.H., *The Sea Floor: An Introduction to Marine Geology* (3rd ed.) (Springer Publishers). The book can be purchased used or new online. Used paperback versions cost about $15. Additional readings will be taken from recent geoscience journal papers. The journal paper readings will be found online or on the class Webcourse site, or in the bound periodicals in the library. Some Web resources will also be assigned for study.

Web Resources: Information will be provided in class regarding the class Webcourse site. The website is accessible at: **https://webcourses.ucf.edu/courses/**. The syllabus and all class materials, plus supplemental material, will all be posted on that site. Grades can also be accessed on the site. University technical support for Webcourse issues is available at **http://online.ucf.edu/support/,** or by phone at 407-823-0407, or via email at **onlinesupport@ucf.edu**. If you have not used Webcourse previously, go through the tutorial at: **https://online.ucf.edu/support/webcourses/other/student-tour**/. Additional links will be made available on the course website for access to other resources in environmental geoscience.

Problem Sets: Occasional problem sets and other assignments on current topics may be distributed in class, to be discussed and handed in the following week.

Journal Paper Abstracts: In order to become familiar with the recent literature in marine geoscience, each student should identify one significant journal paper that is related to a topic that will be covered in the course. The selected paper should be recent (post-2000). GEOREF or some similar geoscience database should be used to identify the paper. An introduction to use of the GEOREF database is attached. On the class date when that topic will be discussed in class, the student will present a 5-minute summary of the paper. This should involve a brief discussion of the paper's contents and its relevance to the topic for that day. A one-page synopsis of the paper should be handed out to all members of the class. The handout should include the full reference to the paper and a brief summary. It should also include the more important cited references, and may include any relevant illustrations. Topic selection should be turned in by email on or before **Aug. 30.** A schedule will be compiled and distributed showing when the abstracts will come up in class.

Course Requirements and Evaluation: Each member of the class will be expected to: (1) Complete the readings for each week's meeting; (2) Participate in discussions related to the week's topic; (3) Complete any problem sets and abstracts assigned in class; (4) Complete two in-class tests. Grades will be calculated as follows: two tests (35% each), journal paper abstract (15%); problem sets and class participation (15% combined).

Testing Notes: No makeup tests will be allowed except in cases of excused absences (such as official extracurricular events, or excused illness involving a note from a doctor). A note from advisor or coach will be required for extracurricular events. Contact me beforehand, not after the exam. All tests are closed book and closed notes. No books, papers, notes, laptops or other items are permitted to be used at the time of the exam. Cell phones and laptops must be turned OFF during tests.

Academic Conduct Policy: Academic dishonesty in any form will not be tolerated. If you are uncertain as to what constitutes academic dishonesty, please consult The Golden Rule, the University of Central Florida's Student Handbook (**http://www.goldenrule.sdes.ucf.edu/)** for further details. As in all University courses, The Golden Rule Rules of Conduct will be applied. Violations of these rules will result, at a minimum, in a record of the infraction being placed in your file and a grade of zero on the work in question. At the instructor's discretion, you may also receive a failing grade for the course.

Disability Statement: The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. Students with disabilities who need accommodations in this course should contact the professor at the beginning of the semester. Those requiring accommodations must be registered with Student Accessibility Services, Ferrell Commons 185, phone (407) 823-2371, **http://sas.sdes.ucf.edu/.**

Attendance: All instructors are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete the following academic activity by the **end of the first week of classes** or as soon as possible after adding the course. Failure to do so may result in a delay in the disbursement of your financial aid.

The activity involves accessing the class Webcourse site and selecting the Discussions button on the panel on the left side of the main page. Be sure to read the Start-of-Semester discussion and reply. Your response will constitute a record of first week attendance. The activity must be completed by the end of the first week of class.

Class Schedule

Week	Date (M/W)	Subject	Seibold Chapters	Due Dates
1	Aug. 21	Introduction		
	Aug. 23	Deep sea floor, ocean morphology	1, App. 2	
2	Aug. 28	Continental drift, sea-floor spreading	Intro, 1, App. 3	*Journal abstract*
	Aug. 30	Continental drift, sea-floor spreading	"	*topic, 8/30*
3	Sept. 4	**Labor Day Holiday**		
	Sept. 6	Plate tectonics	1, App. 6-7	
4	Sept. 11	Slow-spreading ridges	TBA	
	Sept. 13	Tectonic history of the oceans	1, 9, TBA	
5	Sept. 18	Sea level, seismic stratigraphy	5	
	Sept. 20	Sea level, seismic stratigraphy	TBA	
6	Sept. 25	Marine margin environments	TBA	
	Sept. 27	Continental shelves	2, TBA	
7	Oct. 2	Divergent margins	2	
	Oct. 4	Convergent margins	2	

8	Oct. 9	Hydrothermal vents, cold seeps,chemosynthesis	6, TBA
	Oct. 11	**Midterm Test**	
9	Oct. 16	Ocean circulation and bottom currents	4, TBA
	Oct. 18	Terrigenous sediments, sediment sources	3, 8, App. 5-6-7
10	Oct. 23	Biogenic and authigenic sediments, productivity	3, 6, App. 9
	Oct. 25	Marine mineral resources	10, App. 4
12	Oct. 30	Marine energy resources	TBA
	Nov. 1	Marine waste disposal and pollution	10
13	Nov. 6	Tectonic history of the oceans	1, 9, TBA
	Nov. 8	Tools of paleoceanography	8, 9, App. 8, TBA
14	Nov. 13	Paleoceanographic history	8, 9, App. 8, TBA
	Nov. 15	Paleoceanographic history	
15	Nov. 20	Global change and the oceans	7, 9
	Nov. 22	Global change and the oceans	TBA
16	Nov. 27	**Student presentations**	
	Nov. 29	**Student presentations**	
17	Dec. 4	**Final Exam Week**	

Using Online Databases to Access Professional Papers

In order to become familiar with the recent literature in marine geoscience, an online database can be used to directly access peer-reviewed journal papers. GEOREF is the largest and most comprehensive geoscience database, although others are also available. GEOREF can be accessed via the library's online database system (**http://guides.ucf.edu/az.php?a=a**).

Use the Advanced Search option in GEOREF. On the Advanced Search menu, under "Source Type," select "Scholarly Journals." Specify English as the language. Limit the dates to 2000 to present. In the search terms at the top of the page, enter one or two keywords that apply to one of the class topics, such as "seafloor" AND "sediment" AND "Atlantic." If the list of papers that results is too large, add more keywords, using AND.

When you examine the list of possible readings, exclude any that are not in professional journals. In other words, don't use book chapters, conference proceedings, encyclopedia articles, conference abstracts, or technical reports.

Most of the references shown should be available online via the library's E-Journals. You can find out if the journal is available online by going back to the GEOREF main page and checking "Limit to full text."

For the Abstracts, scan through a selection of the more representative titles. Select a paper that is of general interest. Avoid any that refer only to a small geographic area. In writing the one-page synopsis of the paper to deliver in class, start with the complete reference at the top of the page. Add a full summary of the paper. You should include one or more of the important references, and can also include any relevant illustrations.

The formats for citations should be those found in the Instructions for Authors for the *Bulletin of the Geological Society of America,* which will be posted on the Webcourse site under Assignments.

University of Central Florida

Graduate Course Action Request Form

☑ Course Addition ☐ Course Revision ☐ Course Deletion

Forward to your college office

Course additions and course revisions must be accompanied by a course syllabus and rationale. Departments must also submit an electronic syllabus to the college curriculum person.

Course Information

College: Sciences **Department:** Physics

Department Chair: Dr. Eduardo Mucciolo **Phone:** 823-1882

Approved Graduate Faculty/Scholars: Dr. Joseph F. Donoghue

	Course Prefix	Number	Title	Credit Hours Ex.: 3(3,0)
Current or New Course	GLY	5xxx	Marine Geoscience	3(3,0)
Proposed Course Revision				

30 Character Abbreviation: Marine Geoscience

Course Description (25 word limit)

Examination of the physical processes operating in the world ocean; marine tectonics, ocean history; marine sediments; ocean circulation; marine energy; sea-level change; marine research methods.

New or revised Materials and Supply Fees? ☐ Yes ☑ No If yes, also complete the Materials and Supply Fee Request Form.

Repeat for credit? ☐ Yes ☑ No If yes, indicate the total times this course may be used in the degree program. _____

Repeat within same semester? ☐ Yes ☑ No

NOTE: For a repeatable course, indicate in the syllabus what will remain the same and what will change when the course is repeated. Also indicate who approves content before a course is repeated.

Prerequisite(s) and/or Corequisite(s): Graduate standing

Graded S/U? ☐ Yes ☑ No

Split-Level Class: ☑ Yes ☐ No

If offering a split-level class, complete this section even if it had been approved earlier for individual delivery.

List undergraduate split-level course: GLY-4xxx. Marine Geoscience

NOTE: Both the graduate and the undergraduate split-level syllabi must be approved through the established university process for approving courses so that there are two separate and complete syllabi for each course. The graduate syllabus should clearly demonstrate more advanced subject matter, expectations, and rigor. Attach both undergraduate and graduate syllabi to this form.

Term of Offering

When will the course be offered?

☑ Odd Fall ☐ Odd Spring ☐ Odd Summer ☐ Every Semester

☐ Even Fall ☐ Even Spring ☐ Even Summer ☐ Occasional

Intended Utilization of Course

The course will be used primarily as:

☐ Required Course ☑ Elective Course

Justification for Course Addition or Course Revision

What is the rationale for adding or revising this course?

There is increasing interest in enhancing UCF's geoscience offerings, and in particular those related to marine science. This course represents one of the fundamental topics in geoscience and should be of interest to many students in the physical and life sciences and engineering.

What majors require or recommend this course for graduation? N/A

If not a major requirement, what will be the source of students? Science and engineering graduate students with interest in marine science.

What is the estimated annual enrollment? 20

Possible duplications and conflicts with other departments or colleges should be discussed with appropriate parties. Please detail discussion you have had.

There are no known comparable courses in the university curriculum. The course syllabus was provided to Dr. Graham Worthy, chair of the Biology Department. He said that the department would support the course and sees minimal overlap with the department's undergraduate Oceanography course (OCE 3008).

Justification for Course Deletion

Is this course a required course for graduation in a major or prerequisite? ☐ Yes ☒ No

If yes, have the involved major departments been informed, in writing, of proposed deletion? ☐ Yes ☐ No

If not, explain

Notes:

Approval Signatures

Department Chair _____ **Date** 01/12/17

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Vice President for Research and Dean of the College of Graduate Studies _____ **Date** _____

SYLLABUS **Fall 20__**

GLY-5XXX
Marine Geoscience
M/W 3:30 – 4:45 pm

Prof. Joseph F. Donoghue
joseph.donoghue@ucf.edu
PSB 463, 407-823-0631
Hours: Fri., 1:30 – 4:00 pm,
or by appointment

Course Description: *Marine Geoscience (3).* Examination of the physical processes operating in the world ocean; marine tectonics, ocean history; marine sediments; ocean circulation; marine energy; sea-level change; marine research methods.

Course Goals: The objectives of this course are: to develop the critical thinking skills necessary to understand the physical basis, dynamics and history of the ocean basins; to become aware of recent topics in marine geoscience; to provide an introduction to paleoceanography; and to develop familiarization with research methods in marine geoscience.

Readings: Many readings will be taken from a text: Seibold, E., and Berger, W.H., *The Sea Floor: An Introduction to Marine Geology* (3rd ed.) (Springer Publishers). The book can be purchased used or new online. Used paperback versions cost about $15. Additional readings will be taken from recent geoscience journal papers. The journal paper readings will be found online or on the class Webcourse site, or in the bound periodicals in the library. Some Web resources will also be assigned for study.

Web Resources: Information will be provided in class regarding the class Webcourse site. The website is accessible at: **https://webcourses.ucf.edu/courses/**. The syllabus and all class materials, plus supplemental material, will all be posted on that site. Grades can also be accessed on the site. University technical support for Webcourse issues is available at **http://online.ucf.edu/support/,** or by phone at 407-823-0407, or via email at **onlinesupport@ucf.edu**. If you have not used Webcourse previously, go through the tutorial at: **https://online.ucf.edu/support/webcourses/other/student-tour/**. Additional links will be made available on the course website for access to other resources in environmental geoscience.

Problem Sets: Occasional problem sets and other assignments on current topics may be distributed in class, to be discussed and handed in the following week.

Journal Paper Abstracts: In order to become familiar with the recent literature in marine geoscience, each student should identify two significant journal papers that are related to two separate topics that will be covered in the course. The selected papers should be recent (post-2000). GEOREF or some similar geoscience database should be used to identify the paper. An introduction to use of the GEOREF database is attached. On the class dates when the topics will be discussed in class, the student will present a 5-minute summary of the paper. This should involve a brief discussion of the paper's contents and its relevance to the topic for that day. A one-page synopsis of the paper should be handed out to all members of the class. The handout should include the full reference to the paper and a brief summary. It should also include the more important cited references, and may include any relevant illustrations. Topic selection should be turned in by email on or before **Aug. 30.** The subject may not be related to the student's thesis or dissertation topic. A schedule will be compiled and distributed showing when the abstracts will come up in class.

Term Project: For graduate credit, a term project will be required. The project will involve selection of a topic relevant to the course, submission of a Powerpoint file to the instructor, and a 15-minute in-class presentation. The presentation format will be the same as that of professional geoscience meetings. Selection of the topic should involve consultation with the instructor. The presentation and Powerpoint file should include a final slide containing references to the recent literature in marine geoscience. You should select several relevant recent peer-reviewed papers in marine geoscience. The GEOREF online database is the best source for your references. An introduction to use of the GEOREF database is attached. A

standard bibliographic format should be used for citations and the Bibliography, such as that of the *Bulletin of the Geological Society of America*. The *GSA Bulletin* formats are available on the class Webcourse site. The presentation title and a one-paragraph outline need to be sent to the instructor by **Oct. 4.** The subject may not be related to the student's thesis or dissertation topic, and must be different from the topic chosen for the abstract (above). The Powerpoint file should be submitted by **November 20**. The projects will be presented in class on **November 27 and 29.**

Course Requirements and Evaluation: Each member of the class will be expected to: (1) Complete the readings for each week's meeting; (2) Participate in discussions related to the week's topic; (3) Complete any problem sets and abstracts assigned in class; (4) Complete two in-class tests; (5) Complete a term project as described above. Grades will be calculated as follows: two tests (30% each); journal paper abstracts (20%); term project (10%), problem sets and class participation (10%).

Exam Policy: No makeup tests will be allowed except in cases of excused absences (such as official extracurricular events, or excused illness involving a note from a doctor). A note from advisor or coach will be required for extracurricular events. Contact me beforehand, not after the exam. All tests are closed book and closed notes. No books, papers, notes, laptops or other items are permitted to be used at the time of the exam. Cell phones and laptops must be turned OFF during tests.

Academic Integrity Policy: Academic dishonesty in any form will not be tolerated. If you are uncertain as to what constitutes academic dishonesty, please consult The Golden Rule, the University of Central Florida's Student Handbook (**http://www.goldenrule.sdes.ucf.edu/)** for further details. As in all University courses, The Golden Rule Rules of Conduct will be applied. Violations of these rules will result, at a minimum, in a record of the infraction being placed in your file and a grade of zero on the work in question. At the instructor's discretion, you may also receive a failing grade for the course.

Disability Statement: The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. Students with disabilities who need accommodations in this course should contact the professor at the beginning of the semester. Those requiring accommodations must be registered with Student Accessibility Services, Ferrell Commons 185, phone (407) 823-2371, **http://sas.sdes.ucf.edu/.**

Attendance: All instructors are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete the following academic activity by the **end of the first week of classes** or as soon as possible after adding the course. Failure to do so may result in a delay in the disbursement of your financial aid.

The activity involves accessing the class Webcourse site and selecting the Discussions button on the panel on the left side of the main page. Be sure to read the Start-of-Semester discussion and reply. Your response will constitute a record of first week attendance. The activity must be completed by the end of the first week of class.

Course Calendar

Week	Date (M/W)	Subject	Seibold Chapters	Due Dates
1	Aug. 21	Introduction		
	Aug. 23	Deep sea floor, ocean morphology	1, App. 2	
2	Aug. 28	Continental drift, sea-floor spreading	Intro, 1, App. 3	*Journal abstract*
	Aug. 30	Continental drift, sea-floor spreading	"	*topics, 8/30*
3	Sept. 4	**Labor Day Holiday**		
	Sept. 6	Plate tectonics	1, App. 6-7	

4	Sept. 11	Slow-spreading ridges	TBA	
	Sept. 13	Tectonic history of the oceans	1, 9, TBA	
5	Sept. 18	Sea level, seismic stratigraphy	5	
	Sept. 20	Sea level, seismic stratigraphy	TBA	
6	Sept. 25	Marine margin environments	TBA	
	Sept. 27	Continental shelves	2, TBA	
7	Oct. 2	Divergent margins	2	*Presentation*
	Oct. 4	Convergent margins	2	*outline, 10/4*
8	Oct. 9	Hydrothermal vents, cold seeps,chemosynthesis	6, TBA	
	Oct. 11	**Midterm Test**		
9	Oct. 16	Ocean circulation and bottom currents	4, TBA	
	Oct. 18	Terrigenous sediments, sediment sources	3, 8, App. 5-6-7	
10	Oct. 23	Biogenic and authigenic sediments, productivity	3, 6, App. 9	
	Oct. 25	Marine mineral resources	10, App. 4	
12	Oct. 30	Marine energy resources	TBA	
	Nov. 1	Marine waste disposal and pollution	10	
13	Nov. 6	Tectonic history of the oceans	1, 9, TBA	
	Nov. 8	Tools of paleoceanography	8, 9, App. 8, TBA	
14	Nov. 13	Paleoceanographic history	8, 9, App. 8, TBA	
	Nov. 15	Paleoceanographic history		
15	Nov. 20	Global change and the oceans	7, 9	*Powerpoint*
	Nov. 22	Global change and the oceans	TBA	*file, 11/20*
16	Nov. 27	**Student presentations**		
	Nov. 29	**Student presentations**		
17	Dec. 4	**Final Exam Week**		

Using Online Databases to Access Professional Papers

In order to become familiar with the recent literature in marine geoscience, an online database can be used to directly access peer-reviewed journal papers. GEOREF is the largest and most comprehensive geoscience database, although others are also available. GEOREF can be accessed via the library's online database system (**http://guides.ucf.edu/az.php?a=a**).

Use the Advanced Search option in GEOREF. On the Advanced Search menu, under "Source Type," select "Scholarly Journals." Specify English as the language. Limit the dates to 2000 to present. In the search terms at the top of the page, enter one or two keywords that apply to one of the class topics, such as "seafloor" AND "sediment" AND "Atlantic." If the list of papers that results is too large, add more keywords, using AND.

When you examine the list of possible readings, exclude any that are not in professional journals. In other words, don't use book chapters, conference proceedings, encyclopedia articles, conference abstracts, or technical reports.

Most of the references shown should be available online via the library's E-Journals. You can find out if the journal is available online by going back to the GEOREF main page and checking "Limit to full text."

For the Abstracts, scan through a selection of the more representative titles. Select a paper that is of general interest. Avoid any that refer only to a small geographic area. In writing the one-page synopsis of the paper to deliver in class, start with the complete reference at the top of the page. Add a full summary of the paper. You should include one or more of the important references, and can also include any relevant illustrations.

The formats for citations should be those found in the Instructions for Authors for the *Bulletin of the Geological Society of America,* which will be posted on the Webcourse site under Assignments.

Biology Department

From: Graham Worthy
Date: Thursday, December 1, 2016 at 4:29 PM
To: Joseph Donoghue
Subject: Re: new geoscience courses

Joe

The Department of Biology supports the development of these two courses and sees minimal overlap with our Oceanography course.

Cheers, Graham

Graham A.J. Worthy, Ph.D.

Department Chair and Pegasus Professor,
Provost's Distinguished Research Professor of Biology,
Hubbs-Sea World Endowed Professor of Marine Mammalogy, and
Director, Physiological Ecology and Bioenergetics Lab

Lead, Sustainable Coastal Systems Initiative

Department of Biology, University of Central Florida,
4110 Libra Dr., Room BIO302A
Orlando FL 32816-2368

407-823-1333 office
407-823-5769 fax
skype: graham.worthy

On 12/1/2016 3:37 PM, Joseph Donoghue wrote:
Hi Graham

As part of the proposed geoscience course offerings that we have been discussing, I'd like to develop two new courses, one in marine geoscience and one in coastal processes. I gave you drafts of the two syllabi when we talked about it a few weeks ago. I am attaching copies.

I'm starting to put together Course Action Request forms for each, and note that the forms require a discussion of possible overlap with offerings from other departments. The only possible overlap that I can see is with the Oceanography course that your department offers. Based on the course description in the catalog, there appears to be minimal content overlap. If you or any of the faculty see any issues with these courses, could you let me know? I'd like to get the paperwork submitted before the end of the semester.

Thanks
Joe

Joseph F. Donoghue
Planetary Sciences Group
Department of Physics
4111 Libra Dr., PSB 430
Univ. Central Florida
Orlando, FL 32816-2385
407-823-0631

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Split-Level Class Action Request Form

The Graduate Council Curriculum Committee discourages the establishment of split-level classes. Graduate students are entitled to more challenging content, instruction, and assessment, which are difficult to provide in classes offered to undergraduates as well. Circumstances may compel a unit to propose a split-level class. In these cases, the proposal should indicate the reasons a split-level class is necessary and what long-term measures are being taken to provide undergraduates and graduates with appropriate coursework. In addition, it is important to differentiate each of the undergraduate and graduate course elements. To provide reviewers with a clear delineation of the differences between the 4000 and 5000 courses, Summary Tables 1 and 2 should be completed.

Please submit this form along with the completed Course Action Request (CAR) form. Include both the 4000 syllabus and the 5000 syllabus. **The 5000 syllabus should bold any additions or differences.**

Provide narrative rationale for split-level class:

Genomics is a rapidly evolving field, such that both graduate students and advanced undergrads with a background in genetics typically have the same starting level of knowledge on current genomics methods, analyses and empirical studies. It is therefore optimal to teach Wildlife Genomics as a split level course, enabling a larger population of advanced undergrads as well as graduate students to gain knowledge and skills in genomic analyses applied to wildlife populations. The format of this course is well-suited to offer enhanced depth of training to graduate students, as they will be responsible for preparing and leading paper discussions, giving them the opportunity to help convey more complex concepts to the undergraduates. Graduate students will also take the genome analysis training from the first half of the course and translate that into a novel, hypothesis-driven analysis of publicly available data, demonstrating that they can conduct skilled independent research.

Table 1— List any **course objectives or content:**

1) that is common to both the undergraduate and graduate syllabi but have been differentiated for undergraduate and graduate students. For example, an objective for undergraduates may require identification of a concept where the graduate objective may require application;

or

2) in cases where entirely new objectives or content have been added to the existing undergraduate objectives and content, in the 5000 course column list any course elements that the graduate syllabus requires in addition to the elements of the undergraduate syllabus. For example, if there are 3 course readings in the undergraduate syllabus and a 4th reading was added for the graduate syllabus, list it in the 5000 course column and leave the 4000 course column blank.

Table 1 Differences Between 4000 and 5000 Course Objectives & Content

Course Element	4000 Course	5000 Course
Training in data analysis	Computer lab training and lab reports cover core tasks and questions	Computer lab training and lab reports cover both core and advanced tasks and questions
Oral communication		Lead one paper discussion session (including turning in a powerpoint with prepared questions prior to discussion)
Application of analysis skills to hypothesis-driven research		Semester-long data mining project conducted independently in grad student groups and worth 15%

Table 2—List different or additional **assessment** elements (course assignments and tests that count toward the grade). For example, if an undergraduate course assignment that requires students to read an article and write a reflection has been expanded to require graduate students to read a book and present it to the class, the two versions of this assignment would be contrasted in this table. If a third exam was added for graduate students, list it in the 5000 column.

Table 2 Differences Between 4000 and 5000 Course Assessment

Course Element	4000 Course Assessment & % of grade	5000 Course Assessment & % of grade
Paper discussion	Participation - 18%	Participation - 10% Leading discussion - 8%
Computer lab	Core methods lab reports - 4% each	Core and advanced methods lab reports - 2% each
Novel data analysis		Final report of data analysis in manuscript format - 15%
Case study presentation	Scoring rubric focused on core concepts and presenting skills - 10%	Scoring rubric focused on core and advanced concepts and sophistication of presentation - 5%

For more information, contact the College of Graduate Studies (graduate@mail.ucf.edu or 407-823-2766) in Millican Hall 230.

UCF

UNDERGRADUATE COURSE ACTION REQUEST FORM
(Departments: Forward form to your college dean's office)

○ New Course ○ Course Revision ○ Course Deletion

College COS Dept. Biology Course Contact Person Laurance Von Kalm Phone 407-823-6684

Academic Affairs approved Instructor Anna Savage Contact's email Anna.Savage@ucf.edu

	Prefix e.g. BSC	# e.g. 1020C	Course Title	Credit e.g. 4(3,2)
New Course: List new course's data	PCB	4xxx	Wildlife Genomoics	3(3,0)
Revision: List Prefix, #, and changed items			Only enter title if changed	Only if changed
Deletion: List Prefix & #			Title not needed	

Important: New courses and course revisions must be accompanied by an electronic course syllabus (Word or RTF file)

For new courses, title revisions, or changed abbreviation:

30 Character Abbreviation Wildlife Genomoics

For new courses or revised prerequisites: Note: All upper division courses must have prerequisites.
Prerequisites &/or Co-requisites (CR:):

A grade of B or better in undergraduate Evolutionary Biology (PCB4683) or consent of the instructor.

For new courses or revised descriptions: Note: 25 word limit.
Course Description:

Understanding of how Genomic methods are applied to problems in wildlife biology, with an emphasis on vertebrate animal species in terrestrial and marine ecosystems.

For new courses, or courses being revised: (If Course Revision, leave blank when there is no change):

Will new/revised course be offered in the next 3 terms? **Yes** ⊙ **No** ○ Term _____ (so that a special topics version will be made available)

New or revised Materials & Supply Fees? **Yes** ○ **No** ⊙ (If yes, also complete the Materials and Supply Fee Request form)

Is course to be repeatable for credit? **Yes** ○ **No** ⊙ (Syllabus must explain how the content changes when repeated.)
If repeatable, specify # of times accepted in major: Unlimited ☐ **or** a maximum of ___; Only if content is different ☐
(If content must be different to be accepted, the department must monitor students' audits to ensure compliance.)

Course to be graded S/U? **Yes** ○ **No** ⊙ Graded NC? **Yes** ○ **No** ○

Source of students: Who will take the course? Biology Undergraduate Students Estimated annual enrollment? 24

Discussion: Possible content overlap with other departments or colleges must be discussed with appropriate parties. Provide evidence of discussions you have had.

Rationale: How does the addition or revision of this course contribute to the university's curriculum?

Much needed addition to the graduate and undergraduate curriculum.

Term of offering on Main campus: (Mark all terms that apply, or mark Occasional). Students will expect this to be offered when indicated.

☒ Odd Fall ☐ Odd Spring ☐ Odd Summer
☐ Even Fall ☐ Even Spring ☐ Even Summer ☐ Occasional

For Course Deletions:
Rationale: Why delete this course?

Impact: If this course is required in any UCF major or is a prerequisite for any UCF course, attach evidence of discussions you have had.

Recommending Authority	Approved	Denied	Signature	Date
Department Chair	✓			2-21-17
College Academic Standards				
College Dean				
UCRC			Recommendation entered in the 4D CatalogDB	
Vice Provost and Dean of Undergraduate Studies			Approvals entered in the 4D CatalogDB	

PCB 4XXX: Wildlife Genomics
3 credits

Course Description

The advent of genomics has allowed new scientific questions to emerge and existing questions to be answered in ways not previously considered. The nascent field of Wildlife Genomics utilizes genetic and genomic approaches to address consequential questions about the ecology, genetics, genomics, conservation, and evolutionary biology of animal species and populations. The field is becoming increasingly important as rapid advances in genomics and genomic technologies provide new tools with which to evaluate, monitor, and predict the impacts of environmental changes on natural and managed wildlife populations. This course is intended to provide graduate and advanced undergraduate students with an understanding of how genomic methods are applied to problems in wildlife biology, with an emphasis on vertebrate animal species in terrestrial and marine ecosystems. The course includes a mix of lectures, discussions of relevant research articles, and computer-based training and exercises. As such, students should be prepared to read current conservation genetics literature, lead and participate in discussions, and analyze genomic data using publicly avalable datasets and analysis pipelines.

Course Objectives

- To understand the massively parallel sequencing revolution and how it has shaped modern approaches for studying genetics and genomics of wildlife populations
- To understand the application of genomic tools to established ecological and evolutionary disciplines commonly applied to wildlife, including conservation genetics, molecular ecology, disease biology, molecular evolution, and systematics
- To understand the types of research and analyses that fall under the umbrella of wildlife genomics, including data generation, manipulation, and analysis
- To learn how to find, manipulate and analyze genomes and genome-scale datasets using public repositories
- To gain scientific communication skills by participating in paper discussion and presenting case study reports

Prerequisites

A grade of B or better in undergraduate Evolutionary Biology (PCB4683) or consent of the instructor.

Class Meetings

Tu/Th 9:00 am – 10:15 am BIO 415 (lecture/paper discussion) *or* BIO 414 (computer lab)

Course Instructor

Dr. Anna E. Savage
Office: BL 435, 407-823-4504
E-mail: Anna.Savage@ucf.edu

Office Hours: Tuesdays 11am-1pm and by appointment.

Webcourses Site
There is a course web site available through Webcourses (https://webcourses.ucf.edu) that I will use to post materials for the course, including the syllabus, calendar dates, PowerPoints, and grades.

Required Text
None

Class Policies
1. Attendance is not strictly required but many studies have shown that students who do not attend class do poorly. In addition, a large portion of the grading for this course will be based on participation in computer labs and paper discussions, therefore success in this class requires attendance.
2. Make ups will not be given without valid documentation that is presented prior to the absence or within 24 hours of the exam.
3. Assigned readings should be completed before attending class and will be provided via webcourses or handed out in class.
4. You are encouraged to discuss any and all portions of the class with me. Please feel free to come to my office hours or make an appointment to discuss the class, especially if you are having trouble.
5. Respect should be given to fellow students and the instructor. Please do not arrive late to class or leave early.
6. Hateful or offensive speech or writing will not be tolerated.
7. Cell phones, iPods, and other electronic devices should be silenced and put away before class starts.
8. Academic dishonesty (cheating and plagiarism) is strictly prohibited and will be taken very seriously and will result at least in an "F" for that assignment (and may, depending on the severity of the case, lead to an "F" for the entire course) and may be subject to appropriate referral to the Office of Student Conduct for further action. See the UCF Golden Rule for further information.

Course Accessibility
It is my goal that this class be an accessible and welcoming experience for all students, including those with disabilities that may impact learning in this class. If anyone believes the design of this course poses barriers to effectively participating and/or demonstrating learning in this course, please meet with me to discuss reasonable options or adjustments. You may also contact SAS (Ferrell Commons 185; 407-823-2371; sas@ucf.edu) to talk about academic accommodations.

Grading
Grades will be assigned according to the following scale:
A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: <60

The grade for this course will be based on six components:

(1) Two **exams** will be given in class on the dates indicated on the schedule (25% each; 50% total). They will consist of multiple choice, short answer and essay questions based on lecture material.

(2) **Computer lab reports** (4% each; 20% total) demonstrating completion of each lab exercise and interpretation of findings.

(3) **Participation** in paper discussions (18%)

(4) During the final exam period, each student will give a 5 minute **oral presentation** on their selected case study (10%).

(5) Pre- and post-quizzes on Webcourses (1% each; 2% total)

Schedule:

The following schedule is approximate and dates may be changed at any time.

Week	Date	Topic
1	22 Aug Tu	Class intro ~ Overview of wildlife genomics ~ semester-long projects
	24 Aug Th	Computer lab 1: Manipulating sequence data and genetic databases
2	29 Aug Tu	The massively parallel sequencing revolution 1: Sanger and pyrosequencing
	31 Aug Th	Computer lab 2: Genomic databses and manipulating genomes
3	5 Sept Tu	The massively parallel sequencing revolution 2: Illumina, PacBio and Oxford Nanopore
	7 Sept Th	Computer lab 3: Command line tutorial
4	12 Sept Tu	Genome evolution and systematics
	14 Sept Th	Computer lab 4: High-Power Computing resources
5	19 Sept Tu	Population genomics
	21 Sept Th	Computer lab 5: Genome analysis (Mauve)
6	26 Sept Tu	Ecological genomics and speciation
	28 Sept Th	Computer lab 6: Transcriptome analysis (Trinity)
7	3 Oct Tu	Genomic adaptation to environmental change
	5 Oct Th	Paper discussion 1
8	10 Oct Tu	***Exam 1***
	12 Oct Th	Paper discussion 2
9	17 Oct Tu	Conservation genomics
	19 Oct Th	Paper discussion 3

10	24 Oct Tu	Functional genomics & CRISPR/Cas9
	26 Oct Th	Paper discussion 4
11	31 Oct Tu	Epigenomics
	2 Nov Th	Paper discussion 5
12	7 Nov Tu	Wildlife disease genomics
	9 Nov Th	Paper discussion 6
13	14 Nov Tu	
	17 Nov Th	Paper discussion 7
14	21 Nov Tu	De-extinction and the future of wildlife genomics
	23 Nov Th	*T**HANKSGIVING – NO CLASS***
15	28 Nov Tu	***Exam 2***
	30 Nov Th	Paper discussion 8
16	Finals week	***FINAL PRESENTATIONS***

University of Central Florida

Course Action Request Form

■ Course Addition ☐ Course Revision ☐ Course Deletion

Forward to your college office

Course Information NOTE: *Course additions and course revisions must be accompanied by a course syllabus and rationale.*
Note: Departments must also submit an electronic syllabus to the college curriculum person.

College: College of Science **Department:** Biology

Department Chair: Dr.Graham Worthy **Phone:** 407-823-1333

Approved Graduate Faculty/Scholars: Anna Savage

	Course Prefix	Number	Title	Credit Hours Ex.: 3(3,0)
Course Prefix	PCB	5xxx	~~ST~~:Wildlife Genomics	3(3,0)
New or Proposed Revision				

30 Char. Abbreviation: Wildlife Genetics

Course Description (25 word limit)

Understanding of how Genomic methods are applied to problems in wildlife biology, with an emphasis on vertebrate animal species in terrestrial and marine ecosystems.

Will lab fees be charged? ☐ Yes ■ No

Repeat for credit? ☐ Yes ■ No If yes, indicate the total times this course may be used in the degree program. _____

Repeat within same semester? ☐ Yes ■ No

NOTE: For a repeatable course, indicate in the syllabus what will remain the same and what will change when the course is repeated. Also indicate who approves content before a course is repeated.

Prerequisite(s) and/or Corequisite(s): Graduate Student in the Biology Master or PhD program. **Graded S/U?** ☐ Yes ■ No

Split-Level Class: ■ Yes ☐ No

If offering a split-level class, complete this section even if it had been approved earlier for individual delivery.

List undergraduate split-level course: PCB 4xxx

NOTE: *Both the graduate and the undergraduate split-level syllabi must be approved through the established university process for approving courses so that there are two separate and complete syllabi for each course. The graduate syllabus should clearly demonstrate more advanced subject matter, expectations, and rigor. Attach both undergraduate and graduate syllabi to this form.*

Term of Offering
When will course be offered?

■ Odd Fall ☐ Odd Spring ☐ Odd Summer ☐ Every Semester

☐ Even Fall ☐ Even Spring ☐ Even Summer ☐ Occasional

Intended Utilization of Course
The course will be used primarily as:

☐ Required Courses ■ Elective Courses

Justification for Course Addition or Course Revision

What is the rationale for adding/changing this course?

Much needed addition to the graduate and undergraduate curriculum.

What majors require or recommend this course for graduation? None

If not a major requirement, what will be the source of students? Graduate and Undergraduate Biology Majors

What is the estimated annual enrollment? 24 total

Possible duplications and conflicts with other departments or colleges should be discussed with appropriate parties. Please detail discussion you have had.

Justification for Course Deletion

Is this course a required course for graduation in a major or prerequisite? ☐ Yes ☐ No

If yes, have the involved major departments been informed, in writing, of proposed deletion? ☐ Yes ☐ No

If not, explain:Course Description (25 word limit)

Notes:

Approval Signatures

Department Chair _____ Date 2-21-17

College Academic Standards _____ Date _____

College Dean _____ Date _____

Graduate Council _____ Date _____

Graduate Dean _____ Date _____

PCB 5XXX: Wildlife Genomics
3 credits

Course Description

The advent of genomics has allowed new scientific questions to emerge and existing questions to be answered in ways not previously considered. The nascent field of Wildlife Genomics utilizes genetic and genomic approaches to address consequential questions about the ecology, genetics, genomics, conservation, and evolutionary biology of animal species and populations. The field is becoming increasingly important as rapid advances in genomics and genomic technologies provide new tools with which to evaluate, monitor, and predict the impacts of environmental changes on natural and managed wildlife populations. This course is intended to provide graduate and advanced undergraduate students with an understanding of how genomic methods are applied to problems in wildlife biology, with an emphasis on vertebrate animal species in terrestrial and marine ecosystems. The course includes a mix of lectures, discussions of relevant research articles, and computer-based training and exercises. As such, students should be prepared to read current conservation genetics literature, lead and participate in discussions, and analyze genomic data using publicly avalable datasets and analysis pipelines.

Course Objectives

- To understand the massively parallel sequencing revolution and how it has shaped modern approaches for studying genetics and genomics of wildlife populations
- To understand the application of genomic tools to established ecological and evolutionary disciplines commonly applied to wildlife, including conservation genetics, molecular ecology, disease biology, molecular evolution, and systematics
- To understand the types of research and analyses that fall under the umbrella of wildlife genomics, including data generation, manipulation, and analysis
- To learn how to find, manipulate and analyze genomes and genome-scale datasets using public repositories
- To gain scientific communication skills by participating in paper discussion and presenting case study reports
- To gain academic leadership and teaching skills by preparing and leading paper discussions
- To gain academic research skills by forming and testing novel hypotheses about wildlife genomics using publicly available genomic datasets, implementing analysis skills gained from lab exercises, and writing a manuscript including the results.

Prerequisites

None

Class Meetings

Tu/Th 9:00 am – 10:15 am BIO 415 (lecture/paper discussion) *or* BIO 414 (computer lab)

Course Instructor

Dr. Anna E. Savage
Office: BL 435, 407-823-4504
E-mail: Anna.Savage@ucf.edu
Office Hours: Tuesdays 11am-1pm and by appointment.

Webcourses Site

There is a course web site available through Webcourses (https://webcourses.ucf.edu) that I will use to post materials for the course, including the syllabus, calendar dates, PowerPoints, and grades.

Required Text

None

Class Policies

1. Attendance is not strictly required but many studies have shown that students who do not attend class do poorly. In addition, a large portion of the grading for this course will be based on participation in computer labs and paper discussions, therefore success in this class requires attendance.
2. Make ups will not be given without valid documentation that is presented prior to the absence or within 24 hours of the exam.
3. Assigned readings should be completed before attending class and will be provided via webcourses or handed out in class.
4. You are encouraged to discuss any and all portions of the class with me. Please feel free to come to my office hours or make an appointment to discuss the class, especially if you are having trouble.
5. Respect should be given to fellow students and the instructor. Please do not arrive late to class or leave early.
6. Hateful or offensive speech or writing will not be tolerated.
7. Cell phones, iPods, and other electronic devices should be silenced and put away before class starts.
8. Academic dishonesty (cheating and plagiarism) is strictly prohibited and will be taken very seriously and will result at least in an "F" for that assignment (and may, depending on the severity of the case, lead to an "F" for the entire course) and may be subject to appropriate referral to the Office of Student Conduct for further action. See the UCF Golden Rule for further information.

Course Accessibility

It is my goal that this class be an accessible and welcoming experience for all students, including those with disabilities that may impact learning in this class. If anyone believes the design of this course poses barriers to effectively participating and/or demonstrating learning in this course, please meet with me to discuss reasonable options or adjustments. You may also contact SAS (Ferrell Commons 185; 407-823-2371; sas@ucf.edu) to talk about academic accommodations.

Grading

Grades will be assigned according to the following scale:
A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: <60

The grade for this course will be based on six components:

(1) Two **exams** will be given in class on the dates indicated on the schedule (25% each; 50% total). They will consist of multiple choice, short answer and essay questions based on lecture material.

(2) **Computer lab reports** (2% each; 10% total) demonstrating completion of each lab exercise and interpretation of findings.

(3) **Participation** in paper discussions (10%)

(4) During the final exam period, each student will give a 5 minute **oral presentation** on their selected case study (5%).

(5) Pre- and post-quizzes on Webcourses (1% each; 2% total)

(6) Each graduate student will **lead 1 paper discussion**, including preparation of 5 discussion questions and a powerpoint summary of 5-10 slides prior to class (8%)

(7) Each graduate student group (2-4 students) will submit a **final report** of their genomic data mining analysis project written in the format of a scientific journal article, including the following sections: Introduction, Methods, Results (with figures/tables) and Discussion (**group receives one grade;** 15%)

Schedule:

The following schedule is approximate and dates may be changed at any time.

Week	Date	Topic
1	22 Aug Tu	Class intro ~ Overview of wildlife genomics ~ semester-long projects
	24 Aug Th	Computer lab 1: Manipulating sequence data and genetic databases
2	29 Aug Tu	The massively parallel sequencing revolution 1: Sanger and pyrosequencing
	31 Aug Th	Computer lab 2: Genomic databses and manipulating genomes
3	5 Sept Tu	The massively parallel sequencing revolution 2: Illumina, PacBio and Oxford Nanopore
	7 Sept Th	Computer lab 3: Command line tutorial
4	12 Sept Tu	Genome evolution and systematics
	14 Sept Th	Computer lab 4: High-Power Computing resources
5	19 Sept Tu	Population genomics
	21 Sept Th	Computer lab 5: Genome analysis (Mauve)
6	26 Sept Tu	Ecological genomics and speciation

	28 Sept Th	Computer lab 6: Transcriptome analysis (Trinity)
7	3 Oct Tu	Genomic adaptation to environmental change
	5 Oct Th	Paper discussion 1
8	10 Oct Tu	***Exam 1***
	12 Oct Th	Paper discussion 2
9	17 Oct Tu	Conservation genomics
	19 Oct Th	Paper discussion 3
10	24 Oct Tu	Functional genomics & CRISPR/Cas9
	26 Oct Th	Paper discussion 4
11	31 Oct Tu	Epigenomics
	2 Nov Th	Paper discussion 5
12	7 Nov Tu	Wildlife disease genomics
	9 Nov Th	Paper discussion 6
13	14 Nov Tu	
	17 Nov Th	Paper discussion 7
14	21 Nov Tu	De-extinction and the future of wildlife genomics
	23 Nov Th	*T**HANKSGIVING – NO CLASS***
15	28 Nov Tu	***Exam 2***
	30 Nov Th	Paper discussion 8
16	Finals week	***FINAL PRESENTATIONS***

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

NEW FORM – BEGINNING FALL 2015

Program Recommendation Form - INACTIVATIONS / SUSPENSIONS ONLY

This form is to be used to **INACTIVATE** or **SUSPEND** degree programs, tracks, or certificate programs.

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of Items to be attached with completed form:

☐ If applicable, a written agreement from all involved units that they are in support of this inactivation or suspension.

☐ If applicable, attach a teach out plan.

College/Unit(s) Submitting Proposal: COHPA/School of Social Work/Master of Social Work

☑ **INACTIVATION - Proposed Effective Term/Year:** ~~Fall 2015~~ Summer 2017

Admissions will be permanently suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach out plan is required. The program will be removed from the catalog as of the approved term.

☐ **SUSPENSION - Proposed Effective Term/Year:** _____

Admissions will be temporarily suspended for new students and the program will be removed from the online application. A notation will be entered in the graduate catalog indicating the program is not accepting applications. Currently enrolled students will not experience any issues with continued enrollment. Suspension is limited to no more than three years.

Unit(s) Housing Program: School of Social Work/Master of Social Work

Name of program, track and/or certificate: MSW Daytona Part Time & MSW Osceola Part Time & MSW Daytona Regional Campus

Please check all that apply: This action affects a: ☐ **Program** ☑ **Track** ☐ **Certificate**

If the inactivation/suspension applies to multiple tracks, please list them here:

MSW Daytona Part Time & MSW Osceola Part Time & MSW Daytona Regional Campus

Brief description of **program and rationale** for the inactivation/suspension: **Do not add complete catalog copy here.**

The MSW program, Regional Campus Tracks allowed students not holding a BSW a part-time option to earn their MSW. The regional campus options for the MSW program were suspended due to lack of enrollment. The Daytona campus last appeared in the 2011-2012 catalog and the Osceola campus was suspended in 2013-2014. Each track completed their planned teach out.
At this time, the MSW program has started an online track for students interested in earning their MSW part-time. There is no longer a need for regional, ground campuses.

HPA
Grad Office

Impact on Current Students

Are students currently enrolled in the program? ☐ Yes ☑ No

If yes, number of current students: _____

If program, track, or certificate is being inactivated or suspended, then attach a "teach out" plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The "teach out" plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if yes, when the completion date will be, whether students will be moved to another program, etc.

Enter the terms and courses that will be taught for each term throughout the last semester.

Fall	Spring	Summer	Fall	Spring

Signature Page

Recommend Approval (all approval levels must be signed)

Department Chair /Director	**(Print)** Bonnie Yegidis	**(Signature)**		**Date**	11/10/15
College Academic Standards	**(Print)** Ross Wolf	**(Signature)**		**Date**	2/27/17
College Dean	**(Print)** Michael Frunkin	**(Signature)**		**Date**	3/1/17
Graduate Council	**(Print)**	**(Signature)**		**Date**	
Graduate Dean	**(Print)**	**(Signature)**		**Date**	

Approval

Provost and Executive Vice President: _____ **Date** _____

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

University of Central Florida

Graduate Program Recommendation Form - REVISIONS ONLY

This form is to be used to **REVISE** degree programs, tracks, or certificate programs. If there are changes to a program and the changes will also affect the program tracks, one form may be used for both the program and the track(s).

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of items to be attached with completed form:

☑ Complete and current Graduate Catalog copy (www.graduatecatalog.ucf.edu), including description, curriculum, contact information, application requirements, and application deadlines. **Use Track Changes in Word to show revisions.**

☑ A list of faculty who will participate in the program, track or certificate and their credentials.

☑ All course action requests that will be needed to implement the curriculum changes. (not applicable)

☐ If applicable, a written agreement from all involved units that they are in support of the revisions. (not applicable)

College/Unit(s) Submitting Proposal: College of Health and Public Affairs

Proposed Effective Term/Year: Fall 2017

Unit(s) Housing Program: School of Public Administration

Name of program, track and/or certificate: Public Administration MPA – Nonprofit Management MNM Dual Degree Track
Nonprofit Management MNM - Public Administration MPA Dual Degree Track

Please check all that apply: This action affects a: ☑ Program ☑ Track ☐ Certificate

If the revision applies to multiple tracks, please list them here:

Brief description of **program and rationale** of the revision: **Do not add complete catalog copy here.**

The curriculum of the Dual Degree MNM/MPA must be updated and reviewed to incorporate the changes made to the MNM program. These changes include the addition, of a new core course, PAD 6237 Ethics and Governance in Nonprofit Management, and the designation of PAD 6149 Nonprofit Administration, as the capstone course. These changes are aligned with the MNM program seeking NASPAA accreditation.

With these changes to the curriculum and the creation of the new MPA/CCJ Dual Degree (51 credit hours) we took this opportunity to examine the total of credit hours in the program. Currently the MNM/MPA Dual Degree requires 66 credit hours with 5 electives, the new core course reduced that to 4 electives. The proposed curriculum requires the core courses for both the MNM and MPA programs meeting NASPAA accreditation standards. To be competitive with the other UCF dual degree we decided to eliminate elective courses requiring only core courses.

Briefly list curriculum changes in bullet format. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. **Remember to attach the catalog copy showing changes, using Track Changes in Word.**

-Number of credit hours has changed from 66 credit hours to 54 credit hours
-PAD 6237 Ethics and Governance in Nonprofit Management (3 credits) has been added to
-the required courses.
-There are no electives required

**Please see the attached catalog copy

Name Change

Are you changing the name of an existing program, track, or certificate? ☐ Yes ☑ No

If yes, provide the new name of the program, track, or certificate: _____

A proposed name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

If you are ONLY making a name change, skip the "Impact on Current Students" section.

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☑ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

Will students have the option to stay in their existing program, track, or certificate? ☑ Yes ☐ No

If yes, how will current students be impacted by this change?

There will be no academic impact on the current students. If a student previously admitted has completed all coursework according to the proposed curriculum and wants to graduate, a change will be made to student's admit year to accommodate the request.

If there are substantial revisions, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Signature Page

Recommend Approval (all approval levels must be signed)

Jeremy L Hall

Graduate Faculty Program Coordinator (Print) Jeremy Hall & Mary Ann Feldheim (Signature) _____ **Date** 2/24/2017

Department Chair /Director (Print) Naim Kapucu (Signature) _____ **Date** 2/24/2017

College Academic Standards (Print) _____ (Signature) _____ **Date** _____

College Dean (Print) _____ (Signature) _____ **Date** _____

Graduate Council (Print) _____ (Signature) _____ **Date** _____

Vice President for Research and Dean of the College of Graduate Studies

(Print) _____ (Signature) _____ **Date** _____

Approval

Provost and Executive Vice President _____ **Date** _____

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

DUAL DEGREE:
MASTER OF PUBLIC ADMINISTRATION
MASTER OF NONPROFIT MANAGEMENT

Program Description:

The Public Administration MPA- Nonprofit Management MNM -Dual Degree program provides the opportunity for students to earn graduate degrees from two academic programs, the Master of Nonprofit Management and the Master of Public Administration, concurrently. The program emphasizes nonprofit management and public administration research, theory, policy and organizational administration to prepare future public service organizational leaders in public, nonprofit, social service, and private organizations. After completion of the MPA/MNM dual degree program, students will receive two diplomas, one for Master of Nonprofit Management MNM and one for the Public Administration MPA.

Change Rationale:

The curriculum of the Dual Degree MNM/MPA must be updated and reviewed to incorporate the changes made to the MNM program. These changes include the addition, of a new core course, PAD 6237 Ethics and Governance in Nonprofit Management, and the designation of PAD 6149 Nonprofit Administration, as the capstone course. These changes are aligned with the MNM program seeking NASPAA accreditation.

With these changes to the curriculum and the creation of the new MPA/CCJ Dual Degree (51 credit hours), and MPA offered completely online as of fall 2017, we took this opportunity to examine the total of credit hours in the program. Currently the MNM/MPA Dual Degree requires 66 credit hours with 5 electives, the new core course reduced that to 4 electives. The proposed curriculum requires the core courses for both the MNM and MPA programs meeting NASPAA accreditation standards. To be competitive with the other UCF dual degree we decided to eliminate elective courses requiring only core courses.

University of Central Florida

DUAL DEGREE: MASTER OF PUBLIC ADMINISTRATION MASTER OF NONPROFIT MANAGEMENT

Degree Description

The Public Administration MPA- Nonprofit Management MNM -Dual Degree program provides the opportunity for students to earn graduate degrees from two academic programs, the Master of Nonprofit Management and the Master of Public Administration, concurrently. The program emphasizes nonprofit management and public administration research, theory, policy and organizational administration to prepare future public service organizational leaders in public, nonprofit, social service, and private organizations. After completion of the MPA/MNM dual degree program, students will receive two diplomas, one for Master of Nonprofit Management MNM and one for the Public Administration MPA.

The dual degree track consists of 54 credit hours. Each student completes all of the core courses for each program with 18 required core courses (54 hours), including two research methods and statistics courses (6 credit hours), and a capstone experience of two courses (6 credit hours).

Minimum Hours Required for MNM/MPA—54 Credit Hours

Core Requirements - 42 Credit Hours

PAD 5145 Volunteerism in Nonprofit Management (3 credits)
PAD 5146 Nonprofit Resource Development (3 credits)
PAD 5850 Grant and Contract Management (3 credits)
PAD 6035 Public Administration in the Policy Process (3 credits)
PAD 6037 Public Organization Management (3 credits)
PAD 6053 Public Administrators in the Governance Process (3 credits)
PAD 6142 Nonprofit Organizations (3 credits)
PAD 6208 Nonprofit Financial Management (3 credits)
PAD 6207 Public Financial Management (3 credits)
PAD 6227 Public Budgeting (3 credits)
PAD 6237 Ethics and Governance in Nonprofit Management (3 credits)
PAD 6335 Strategic Planning and Management (3 credits)
PAD 6327 Public Program Evaluation Techniques (3 credits)
PAD 6417 Human Resource Management (3 credits)

Research Methods/Statistics Core Requirements - 6 Credit Hours

PAD 6700 Research Methods in Public Administration (3 credits)
PAD 6701 Analytical Techniques for Public Administration (3 credits)

Capstone Core Requirements - 6 Credit Hours

PAD 6149 Nonprofit Administration (3 credits)
PAD 6062 Advanced Concepts and Applications in Public Administration (3 credits)

**Students must earn at least a B- grade in PAD core requirements and a maintain a minimum of a 3.0 GPA to graduate.*

Application and Admission

Applicants must apply online (https://application.graduate.ucf.edu/).

In addition to the general admission requirements, applicants must provide:

- Official transcripts of a bachelor's degree from a regionally accredited college or university, with a GPA of at least 3.0 on a 4.0 scale overall or for the last 60 attempted semester hours of credit earned for the bachelor's degree
- Three letters of recommendation specifically for the MNM/MPA program evaluating scholarly and professional capacity. Letters from professors from the colleges/universities attended are preferred, but if that is not feasible, letters from current or past supervisors will be accepted. The recommender must address the applicant's work ethic and ability to succeed at graduate-level academic work.
- Current professional résumé including nonprofit and public service experience (paid or voluntary).
- Goal Statement: The goal statement is a key component of the admission review process and serves as an example of the applicant's ability to express himself or herself in writing. The goal statement must be no longer than two pages double spaced (500-800 words) and should address the following:
    - Personal background and career aspirations in public service.
    - Reason for pursuing graduate study in nonprofit management and public administration, including future career goals and plans.
    - Specific areas of public administration and nonprofit management that interests you.

Applicants not meeting the minimum standards may be considered as candidates for limited and competitive provisional admittance. However, only students with complete applications (final transcript, resume, letters of recommendation and personal statement) will be reviewed under this special admission category.

Students should be aware that admission to any graduate program is granted on a competitive basis. There may be cases where students meeting minimum requirements are denied admission based on such factors as program capacity or academic discretion

Domestic applicants must turn in all materials prior to the following deadlines:

Fall Priority	Fall Semester	Spring Semester
January 15th	June 15th	November 1st

Note: International students are bound by different deadlines and admissions criteria. These regulations can be found in the graduate catalog: ***www.graduate.ucf.edu*** *Please also check the UCF Graduate Catalog for the most up-to-date admissions information for the program.*

Contact

Public Administration Graduate Advising Office — 407-823-0912 or nasrin@ucf.edu
School of Public Administration — www.cohpa.ucf.edu/publicadmin

DUAL DEGREE:
MASTER OF PUBLIC ADMINISTRATION
MASTER OF NONPROFIT MANAGEMENT

TRACK DESCRIPTION

The Public Administration MPA – Nonprofit Management MNM Dual Degree Track provides the opportunity for students to earn graduate degrees from two academic programs, the Master of Public Administration and the Master of Nonprofit Management, concurrently. The program emphasizes nonprofit management and public administration research, theory, policy and organizational administration to prepare future public service organizational leaders in public, nonprofit, social service, and private organizations. After successful completion of the MNM/MPA Dual Degree program, students will receive two diplomas - one for the Public Administration MPA and one for the Nonprofit Management MNM degree.

Deleted: Students successfully completing this MNM/MPA Dual Degree program will have the skills and analytical techniques for successful careers in both the public and nonprofit sectors.

Students seeking admission to the MNM/MPA Dual Degree program should apply directly to the Dual Degree track of either the Public Administration MPA program or the Nonprofit Management MNM program. Only one application will be required. If admitted, student will be active in the Dual Degree tracks of both the Public Administration MPA and the Nonprofit Management MNM programs.

Students previously admitted to the Public Administration MPA or the Nonprofit Management MNM program should consult with their advisor prior to completing 18 credit hours if interested in the MNM/MPA Dual Degree program.

CURRICULUM

The dual degree track consists of 54 credit hours. Each student completes all of the core courses for each program with 18 required core courses (54 hours), including two research methods and statistics courses (6 credit hours), and a capstone experience of two courses (6 credit hours).

Courses and credit hours used for undergraduate degrees cannot be counted toward the MPA/MNM track, except for Senior Scholar students who, with the permission of the MPA/MNM program director, may use up to 9 credit hours of graduate course work that was used in their undergraduate degree toward credit in the dual degree program.

Deleted: The dual degree track (Master of Public Administration / Master of Nonprofit Management) consists of 66 credit hours. Each student completes a core of 16 courses (48 credit hours), an advanced curriculum of five electives (15 credit hours) that are selected in consultation with the adviser, and a capstone experience equivalent to one course (3 credit hours).¶

Deleted: However, no undergraduate-level courses will be accepted in the MPA/MNM dual degree track.

Total Credit Hours Required:

54 Credit Hours Minimum beyond the Bachelor's Degree

Deleted: 66

Required Core Courses—54 Credit Hours

Deleted: 51

PAD 5145 Volunteerism in Nonprofit Management (3 credits)
PAD 5146 Nonprofit Resource Development (3 credits)
PAD 5850 Grant and Contract Management (3 credits)
PAD 6035 Public Administration in the Policy Process (3 credits) PAD 6037 Public Organization Management (3 credits)
PAD 6053 Public Administrators in the Governance Process (3 credits)
PAD 6142 Nonprofit Organizations (3 credits)
PAD 6208 Nonprofit Financial Management (3 credits)
PAD 6207 Public Financial Management (3 credits)
PAD 6227 Public Budgeting (3 credits)
PAD 6237 Ethics and Governance in Nonprofit Management (3 credits)
PAD 6335 Strategic Planning and Management (3 credits)
PAD 6327 Public Program Evaluation Techniques (3 credits)
PAD 6417 Human Resource Management (3 credits)

Research Methods/Statistics Core Requirements - 6 Credit Hours
PAD 6700 Research Methods in Public Administration (3 credits)
PAD 6701 Analytical Techniques for Public Administration (3 credits)

Capstone Core Requirements - 6 Credit Hours
PAD 6149 Nonprofit Administration (3 credits)
PAD 6062 Advanced Concepts and Applications in Public Administration (3 credits)

**Students must earn at least a B- grade in PAD core requirements and maintain a minimum of a 3.0 GPA to graduate.*

Students will engage in a capstone experience for both the MPA and the MNM programs that builds upon the knowledge and skills gained from completing the core courses. Students will complete this requirement through enrollment in PAD 6062 Advanced Concepts and Applications in Public Administration and PAD 6149 Nonprofit Administration. Capstone courses may only be taken following the completion of all core courses; they may not be combined with core courses in the same semester.

Additional Program Requirements

Students must achieve a grade of "B-" (80%) or higher in every course listed under core requirements). Students must maintain a program of study and graduate status GPA of 3.0 or higher and can only graduate with a graduate status GPA of 3.0 or higher.

Independent Learning

Independent learning is demonstrated throughout the curriculum, through the process of inquiry and dialogue. Tangible projects, such as scholarly research, papers, internships, and the capstone

Deleted: Core—48 Credit Hours¶

Deleted: <#>PAD 6035 Public Administration in the Policy Process (3 credit hours) ¶
PAD 6037 Public Organization Management (3 credit hours) ¶
PAD 6053 Public Administrators in the Governance Process (3 credit hours) ¶
PAD 6207 Public Financial Management (3 credit hours) ¶
PAD 6227 Public Budgeting (3 credit hours) ¶
PAD 6335 Strategic Planning and Management (3 credit hours) ¶
PAD 6417 Human Resource Management (3 credit hours) ¶
PAD 6700 Research Methods in Public Administration (3 credit hours) ¶
PAD 6701 Analytic Techniques for Public Administration (3 credit hours) ¶
PAD 5145 Volunteerism in Nonprofit Management (3 credit hours) ¶
PAD 5146 Nonprofit Resource Development (3 credit hours) ¶
PAD 5850 Grant and Contract Management (3 credit hours) ¶
PAD 6142 Nonprofit Organizations (3 credit hours) ¶
PAD 6149 Nonprofit Administration (3 credit hours) ¶
PAD 6327 Public Program Evaluation (3 credit hours) ¶
PAD 6208 Nonprofit Financial Management (3 credit hours)¶
Capstone—3 Credit Hours¶
PAD 6062 Advanced Concepts and Applications in Public Administration (3 credit hours)¶

Deleted: <#>PAD 6062 is only offered in fall and spring semesters and

Deleted: <#> should be taken f

Deleted: <#>it

Deleted: <#>a

Deleted: Electives—15 Credit Hours¶
Elective courses offered within the dual degree track provide an emphasis on state and local government and nonprofit management; however, other emphases may be developed in consultation with the adviser. With prior approval from the program director, up to 6 credit hours of elective course work may be taken from outside the department. Students must show that elective courses taken outside of the department directly support a career in public administration or nonprofit management. ¶
Electives (15 credit hours)¶
Students without practical administrative experience in the public sector are strongly advised to complete an internship as part of their electives.¶
PAD 6946 Internship (3 credit hours) ¶

Deleted: and in the Capstone Experience (PAD 6062

experience also contribute to the self-development of students. The research paper and Learning and Professional Development portfolio in the Capstone Experience focus on reviewing and analyzing contemporary issues in order to help students acquire knowledge and skills pertaining to research-based best practices. The capstone courses, provides the independent learning experience.

Deleted: PAD 6062, t

Application Requirements

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions section of the Graduate Catalog. Applicants must apply online. All requested materials must be submitted by the established deadline.

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- Official transcripts of a bachelor's degree from a regionally accredited college or university, with a GPA of at least 3.0 on a 4.0 scale overall or for the last 60 attempted semester hours of credit earned for the bachelor's degree
- Three letters of recommendation specifically for the MNM/MPA program evaluating scholarly and professional capacity. Letters from professors from the colleges/universities attended are preferred, but if that is not feasible, letters from current or past supervisors will be accepted. The recommender must address the applicant's work ethic and ability to succeed at graduate-level academic work.
- Current professional résumé including nonprofit and public service experience (paid or voluntary).
- Goal Statement: The goal statement is a key component of the admission review process and serves as an example of the applicant's ability to express himself or herself in writing. The goal statement must be no longer than two pages double spaced (500-800 words) and should address the following:
    - Personal background and career aspirations in public service.
    - Reason for pursuing graduate study in nonprofit management and public administration, including future career goals and plans.
    - Specific areas of public administration and nonprofit management that interests you.

Applicants not meeting the minimum standards may be considered as candidates for limited and competitive provisional admittance. However, only students with complete applications (final transcript, resume, letters of recommendation and personal statement) will be reviewed under this special admission category.

Formatted: Indent: Left: 0.74", No bullets or numbering

Students should be aware that admission to any graduate program is granted on a competitive basis. There may be cases where students meeting minimum requirements are denied admission based on such factors as program capacity or academic discretion

Formatted: Indent: Left: 0.49", No bullets or numbering

Formatted: Indent: Left: 0.74", No bullets or numbering

- Applicants applying to this program who have attended a college/university outside the United States must provide a course-by-course credential evaluation with GPA calculation. Credential evaluations are accepted from World Education Services (WES) or Josef Silny and Associates, Inc. only.
- All International students must meet university minimum TOEFL score requirements regardless of language in which the undergraduate program was completed.

Admission to this dual degree track is competitive; applicants meeting the minimum university and/or program application requirements are not guaranteed admission to the program.

All requested material must be submitted by the established deadline date. Material received after the established deadline may not be considered.

Students are expected to be computer literate upon entry to the program or are expected to obtain these skills immediately upon admission to the program.

Application Deadlines

Nonprofit Management MNM Dual Degree	*Fall Priority	Fall	Spring	Summer
Domestic Applicants	Jan 15	Jun 15	Nov 1	-
International Applicants	Jan 15	Jan 15	Jul 1	-
International Transfer Applicants	Jan 15	Mar 1	Sep 1	-

*Applicants who plan to enroll full time in a degree program and who wish to be considered for university fellowships or assistantships should apply by the Fall Priority date.

Formatted: Indent: Left: 0.74"

Deleted: <#>One official transcript in a sealed envelope, from each college/university attended. ¶
Three letters of recommendation. Letters of recommendation must specifically address the applicant's ability to succeed in graduate coursework and his or her work ethic. Recommendation letters from professors are preferred, however, letters from supervisors are also acceptable. ¶
Résumé: The most current, professional resume should be provided. ¶
Statement of goals: This is a key component of the admission review process and serves as an example of the applicant's ability to express him or herself in writing. The goal statement must be no longer than two pages and should address the following: ¶
Reason for pursuing graduate study in Nonprofit Management and Public Administration, including future goals and plans. ¶
Specific areas of Nonprofit Management and Public Administration of interest. ¶
Relevant experience, paid or as a volunteer (required). ¶
What makes the applicant a special candidate for admission to this limited access program. ¶

List of Faculty:

Mary Ann Feldheim, Ph.D.,

Stephanie Krick, Ph.D., Associate Lecturer

Hui Li, Ph.D., Assistant Professor

Suzette Myser, Ph.D., Assistant Professor

Gregg Buckingham, Ed. D, Lecturer

Daniel Seigler, Ph.D., Lecturer

Deborah Carroll, Ph.D., Associate Professor

Staci Zavattaro, Ph.D., Associate Professor

Liou Kutsai, Ph.D., Professor

Qian Hu, Ph.D., Assistant Professor

Jeremy Hall, Ph.D., Professor

David Mitchell, Pd.D., Assistant Professor

Naim Kapucu, Ph.D., Professor

Jungwon, Yeo, Ph.D., Assistant Professor

University of Central Florida

Graduate Program Recommendation Form - REVISIONS ONLY

This form is to be used to **REVISE** degree programs, tracks, or certificate programs. If there are changes to a program and the changes will also affect the program tracks, one form may be used for both the program and the track(s).

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of items to be attached with completed form:

☑ Complete and current Graduate Catalog copy (www.graduatecatalog.ucf.edu), including description, curriculum, contact information, application requirements, and application deadlines. **Use Track Changes in Word to show revisions.**

☑ A list of faculty who will participate in the program, track or certificate and their credentials.

☑ All course action requests that will be needed to implement the curriculum changes.

☑ If applicable, a written agreement from all involved units that they are in support of the revisions.

College/Unit(s) Submitting Proposal: CEDHP/EHS/ID&T

Proposed Effective Term/Year: Fall 2017

Unit(s) Housing Program: EHS

Name of program, track and/or certificate: Instructional Design & Technology

Please check all that apply: This action affects a: ☐ Program ☑ Track ☐ Certificate

If the revision applies to multiple tracks, please list them here:

Brief description of **program and rationale** of the revision: **Do not add complete catalog copy here.**

PhD in Education, Instructional Technology Track prepares students for teaching and research in the field of instructional systems in professions such as a university professor or corporate researcher.

Briefly list curriculum changes in bullet format. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. **Remember to attach the catalog copy showing changes, using Track Changes in Word.**

- Changes to track name (below)
- Changes to Independent Learning requirements and catalog description (attached)

Name Change

Are you changing the name of an existing program, track, or certificate? ☑ Yes ☐ No

If yes, provide the new name of the program, track, or certificate: PhD in Education, Instructional Design & Technology Track

A proposed name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

If you are ONLY making a name change, skip the "Impact on Current Students" section.

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☐ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

Will students have the option to stay in their existing program, track, or certificate? ☐ Yes ☐ No

If yes, how will current students be impacted by this change?

If there are substantial revisions, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Signature Page

Recommend Approval (all approval levels must be signed)

Graduate Faculty (Print) Atsusi Hirumi **(Signature)** ______ **Date** 02/22/17
Program Coordinator Richard Hartshorne ______ 2/22/17

Department Chair (Print) ______ **(Signature)** JP Mendez **Date** 2/22/17
/Director ______ Jay Nickens 2/23/17

College Academic (Print) ______ **(Signature)** ______ **Date** ______
Standards

College Dean (Print) ______ **(Signature)** ______ **Date** ______

Graduate Council (Print) ______ **(Signature)** ______ **Date** ______

Vice President for Research and Dean of the College of Graduate Studies

(Print) ______ **(Signature)** ______ **Date** ______

Approval

Provost and Executive Vice President ______ **Date** ______

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

Requested Revisions to PhD in Education Instructional Technology Track
Graduate Catalog Description

TRACK DESCRIPTION

The Instructional Design & Technology track in the Education PhD program prepares students for teaching and research in the field of instructional design & technology, instructional systems, educational technology, and e-learning in professions such as university professors, corporate directors of training and human resources, and corporate researchers.

CURRICULUM

The Instructional Design & Technology track in the Education PhD program requires a minimum of 69 credit hours beyond the master's degree. Students must complete 24 credit hours of core courses, 9 credit hours of specialization courses, 9 credit hours of electives, 3 credit hours of internship, and 24 credit hours of dissertation. All students must also complete the candidacy examination.

Candidacy

To enter candidacy for the PhD, students must have an overall 3.0 GPA on all graduate work included in the planned program and pass all required examinations. Examinations will be scheduled by the student and major adviser. The Associate Dean for Graduate Studies and Research must be notified of the date and location of the exam 30 days in advance. Students must be enrolled in the university during the semester an examination is taken.

The following are required to be admitted to candidacy and enroll in dissertation hours:

- Submission and completion of an approved program of study, except for dissertation hours.
- Successful completion of the candidacy examination.
- The dissertation advisory committee is formed, consisting of approved graduate faculty and graduate faculty scholars.
- Satisfactory progress towards the independent learning requirements as evidenced by the annual accomplishments and activities report.

Candidacy Examinations

All PhD candidates will be required to complete two examinations.

- Research in the Specialization—8-hour written examination.
- Specialization—3-hour oral examination.

Please note that there may be variations in length of exam time and content based on the respective requirements of each track.

Deleted:

Deleted: a

Deleted: or

Deleted: of

Deleted: .¶
Completion of all course work specified in approved program of study

Deleted: <#>Successful defense of the written dissertation proposal

Deleted: <#>.¶

Independent Learning

During their program of study, PhD students are required to meet the following requirements for independent learning to enter candidacy, including:

- Submitting a manuscript that is deemed appropriate by at least one program faculty member for publication in a peer-reviewed journal.
- Presenting research in at least one international, national or state conference.
- Presenting at university and/or college research symposiums annually.
- Providing service to professional organization, community partner, and/or program.
- Documenting and presenting independent learning accomplishments and activities along with development of an individual research agenda deemed satisfactory by at least two or more program faculty on an annual basis.

APPLICATION REQUIREMENTS

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions section of the Graduate Catalog. Applicants must apply online. All requested materials must be submitted by the established deadline.

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- One official transcript (in a sealed envelope) from each college/university attended.
- A master's degree in a closely related field.
- Official, competitive GRE score (including verbal, analytical, and writing sections, taken within the last five years.
- Three letters of recommendation.
- Goal statement.
- Résumé.
- Writing sample of a ten to twenty page original paper on any topic.
- Schedule an interview (to be completed in person, by phone or webconference) with a program faculty member.

Deleted: The dissertation also satisfies the independent learning requirement. ??

Participating Program Faculty

Atsusi "2c" Hirumi, PhD
Associate Professor

Richard Hartshorne, PhD
Associate Professor

Glenda Gunter, PhD
Associate Professor

Laurie Campbell, PhD
Assistant Professor

University of Central Florida

Graduate Program Recommendation Form - ADDITIONS ONLY

This form is to be used to **ADD** degree programs, tracks, or certificate programs. If there are tracks being added to the program, one form may be used for both the program and the track(s).

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of items to be attached with completed form:

☑ Complete and current Graduate Catalog copy (www.graduatecatalog.ucf.edu), including description, curriculum, contact information, application requirements, and application deadlines.

☑ A list of faculty who will participate in the program, track or certificate and their credentials.

☑ If applicable, a written agreement from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate.

☐ Course Action Request forms, as needed.

☑ Library assessment of resources.

College/Unit(s) Submitting Proposal: College of Medicine/Burnett School of Biomedical Sciences

Proposed Effective Term/Year: Fall 2018

Unit(s) Housing Program: Burnett School of Biomedical Sciences

Name of program, track and/or certificate: Integrated Medical Sciences

Please check all that apply: This action affects a: ☐ Program ☑ Track ☐ Certificate

DELIVERY: Program will be delivered: ☐ Face to Face ☐ UCF Online ☑ Mixed Delivery

Will the program be a **market tuition rate** program? ☐ Yes ☐ No

Will the program be a **cost recovery** program? ☐ Yes ☐ No

Brief description of program and rationale for the addition: **Do not add complete catalog copy here.**

The IMS program is designed to prepare advanced students for acceptance into medical, dental, osteopathic, and/or other related professional schools of their choice. This would be a new MS track (non-thesis) in our Biomedical Sciences MS Program. Students accepted into the program would take a combination of first-year medical school courses along with graduate courses in our Biomedical Sciences curriculum. Excellent performance in this curriculum would provide students with an opportunity to demonstrate their ability to handle medical school coursework. There is high demand from students for such a program, and we aim to attract a highly qualified, diversified, and motivated students to compete for spots in this program, which will be capped at 12 students in the first two years to study the impact on the medical and graduate curricula.

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☑ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

Will students have the option to stay in their existing program, track, or certificate? ☑ Yes ☐ No

If yes, how will current students be impacted by the addition of a program, track or certificate?

No significant impact is expected for current students in Biomedical Sciences MS programs.

Future Students

Provide a statement of who is likely to enroll and why. Please state if there is licensure or certification that depends upon this education, etc. Also, complete the following table.

Students likely to enroll are those who wish to gain or strengthen their credentials and qualifications for gaining admission to medical, dental, osteopathic, or related professional schools in the health sciences.

	Year 1	Year 2	Year 3
Headcount	6	12	TBD
SCHs	198	396	

Indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

Acceptance in the medical, dental, osteopathic, or other health sciences-related professional school of their choice.

Please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1	0				
Year 2	0				
Year 3	0				

Signature Page

Recommend Approval (all approval levels must be signed)

Graduate Faculty Program Coordinator (Print) Steven Ebert, PhD (Signature) _____ Date 3/14/17

Department Chair /Director (Print) _____ (Signature) Griffith Parks Digitally signed by Griffith Parks DN: cn=Griffith Parks, o=University of Central Florida, ou=Burnett School of Biomedical Sciences, email=Griffith.Parks@ucf.edu, c=US Date: 2017.03.14 11:27:53 -04'00' Date _____

College Academic Standards (Print) Saleh Naser (Signature) _____ Date 3-14-2017

College Dean (Print) Deborah German, M.D. (Signature) _____ Date 3-15-17

Graduate Council (Print) _____ (Signature) _____ Date _____

Vice President for Research and Dean of the College of Graduate Studies

(Print) _____ (Signature) _____ Date _____

Approval

Provost and Executive Vice President _____ Date _____

Distribution: After approval is received from the Provost, distribution will be to:

NEW BIOMEDICAL SCIENCES MS TRACK PROPOSAL

ADD NEW TRACK FOR OUR CURRENT BIOMEDICAL SCIENCES MS PROGRAM:

"INTEGRATED MEDICAL SCIENCES (IMS)" TRACK

Hallmark features –

- Flexible MS degree program designed to provide an opportunity for well-qualified students wishing to gain acceptance to medical and related (osteopathic, dental, etc.) health sciences professional schools to strengthen their application through successful completion of this rigorous program (must have GPA ≥ 3.2, MCAT ≥ 500 or GRE ≥ 300 for admission).

- Integrated curriculum whereby students enroll in a combination of first-year medical school modules with medical students and advanced graduate courses with graduate students in Biomedical Sciences and other programs.

- 33 credits required for MS

- Application deadline will be December 15 of the year prior to admission

- Non-thesis degree

- Large pool of motivated students to draw from (not only at UCF, but from around nation once reputation of program becomes established)

- Revenue-generating program (students pay graduate tuition and would be required to pay lab/course fees at medical student rates to cover costs of materials such as ipads needed for the medical modules that are a core feature of this track program)

- Project enrollment to increase by 6 students per year to reach a maximum of 12 students per year within 2 years, when the program will be re-evaluated for its impact on the medical and graduate curricula. The program is envisioned to expand to a maximum of 30 students per year over a 5-6 year period, pending approval following the re-evaluation after the first two years.

- Would provide UCF COM not only with new revenue and reputation, but also a ready-made pool of medical school applicants from whom to choose where we have first-hand evaluations

Course Color Codes:

None = Existing graduate course in our program

Existing medical school module/course

Alternative required courses to replace BSC 6407C Lab Meths Mol Biol (3 cr) and BSC 6431 Practice of Biomed Sci (3 credits)

Addition of existing graduate course to the approved list of electives in Biomedical Specialization

NEW BIOMEDICAL SCIENCES MS TRACK PROPOSAL

Required Courses—18 Credit Hours

- BMS 6001 Cellular Function and Medical Genetics (HB-1, Med-Ed) (5 credit hours)
- BMS 6006 Health and Disease (HB-3, Med-Ed) (5 credit hours)
- MCB 6938 Seminar or IDS 7690 Seminar (2 x 1 credit hour)
- PCB 5834 Adv Human Physiology (4 credits) + PCB 5709L Physiol Lab Simulations = 6 credits (4+2)
- **OR:** PHT 6115 + PHT 6115L Human Gross Anatomy & Neuroscience I with cadaver lab (6 credits)
- **OR:** BSC 5XXX Human Clin Embryology and Congenital Malformations (3 credits) **AND** BSC 5XXX Vertebrate Histology (4 credits) = 7 credits (3+4)(Note: Students selecting the 7 cr option will only have to take 1 credit of Seminar instead of the required 2 cr

Elective Courses—12 Credit Hours

Students take 12 credit hours of electives with 6 credit hours from the Biomedical Specialization and 6 credit hours from the Microbiology Specialization.

Biomedical Specialization

- MCB 5225 Molecular Biology of Disease (3 credit hours)
- MCB 6226 Molecular Diagnostics (3 credit hours)
- PCB 5238 Immunobiology (3 credit hours)
- PCB 5236 Cancer Biology (3 credit hours)
- PCB 5265 Stem Cell Biology
- PCB 5275 Signal Transduction Mechanisms (3 credit hours)
- PCB 5527 Genetic Engineering and Biotechnology (3 credit hours)
- PCB 5709C Laboratory Virtual Simulations in Physiology (2 credit hours)
- PCB 5815 Molecular Aspects of Obesity, Diabetes, and Metabolism (3 credit hours)
- PCB 5834C Advanced Human Physiology (4 credit hours)
- IDS 5127 Foundation of Bio-Imaging Science (3 credit hours)
- BSC 5418 Tissue Engineering (3 credit hours)
- GEB 5516 Technological Entrepreneurship (3 credit hours)
- ZOO 5748C Clinical Neuroanatomy (5 credit hours)
- ZOO 5749C Clinical Neuroscience (5 credit hours)
- Other courses may be substituted subject to approval by the graduate committee

Microbiology Specialization

- MCB 5205 Infectious Processes (3 credit hours)
- MCB 5505 Molecular Virology (3 credit hours)
- MCB 5208 Cellular Microbiology: Host-Pathogen Interactions (3 credit hours)
- MCB 5654 Applied Microbiology (3 credit hours)
- MCB 6417C Microbial Metabolism (3 credit hours)
- MCB 5932 Current Topics in Molecular Biology (3 credit hours)
- MCB 5415 Cellular Metabolism (3 credit hours)
- MCB 5209 Microbial Stress Response (3 credit hours)
- PCB 5235 Molecular Immunology (3 credit hours)
- Other courses may be substituted subject to approval by the graduate committe

NEW BIOMEDICAL SCIENCES MS TRACK PROPOSAL

Capstone Course—3 Credit Hours

- MCB 6026 Capstone Course (Volunteer Service-Learning or Research) (3 credit hours)

Comparison of curricular requirements for MS Biomedical Sciences and the proposed "Integrated Medical Sciences" (IMS) Track:

MS, Biomedical Sciences (Regular Track) Graduate Requirements	**IMS Track in Biomedical Sciences (MS) Graduate Requirements**
BSC6432 (BMS Core I), 5 cr	BMS6001 Cellular Fnc & Medical Genetics (Medical School HB-1 Module), 5 cr*
BSC6433 (BMS Core II), 5 cr	BMS6006 Health and Disease (Medical School HB-3 Module), 5 cr*
BSC6431 (Practice of Biomed Sci), 3 cr	BSC6431 (Practice of Biomed Sci), 3 cr
MCB6938 (Grad Seminar), 1 cr (Must complete 2x1cr=2cr)	Must take at least one of the following courses†: PCB5834 Adv Human Physiology, 4 cr + Lab (PCB5709L, 2cr) BSC5XXX Clin Embryology and Congenital Malforms, 3 cr ZOO5XXX Vertebrate Histology w/Lab, 4 cr PHT6115C Human Gross Anatomy/Neuroscience I, 5 cr
BSC6407C Laboratory Methods in Molecular Biology, 3 cr	
Biomedical Elective Courses, 6 cr	Biomedical Elective Courses, 6 cr
Microbiology Elective Courses, 6 cr	Microbiology Elective Courses, 6 cr
MCB6026 Capstone Course, 3 cr	MCB6026 Capstone Course, 3 cr
Pass Oral Comprehensive Exam (Capstone)	Pass Oral Comprehensive Exam (Capstone)
TOTAL CREDITS = 33	TOTAL CREDITS = 33

*Note: Yellow boxes highlight UCF medical courses to be used to substitute for the graduate program requirement indicated.

†Note: Green box indicates a list of current and proposed graduate course sections that will serve as substitute credits for the required Graduate Seminar and Laboratory Methods courses shown. For students taking courses providing < 5 credits from this section, they can make up the difference by taking 1 or 2 credits of seminar (MCB6938) as needed.

NEW BIOMEDICAL SCIENCES MS TRACK PROPOSAL

Sample Curriculum:

Summer Semester *(Note: Students should be preparing and submitting med school applications at this time)*

1 credit	MCB 6938 Seminar in Biomedical Sciences – **CORE REQ**
6 credits	PHT 6115+L Human Anatomy & Neurosci with Cadaver Lab
3 credits	MCB 6026 CAPSTONE (Volunteer Service-Learning/Research)*

10 credits (total for summer)

Fall Semester

5 credits:	BMS 6001 (HB-1: Med School), 8 wks (Aug-Sep) – **CORE REQ**
3 credits:	Biomedical Elective
3 credits:	Microbiology Elective

11 credits (total for fall)

Spring Semester

5 credits	BMS 6006 (HB-3, Health & Disease, 8 wks, Feb-Apr) – **CORE REQ**
3 credits:	Biomedical Elective
3 credits:	Microbiology Elective

12 credits (total for spring)

33 credits total

**VSL could fall under our existing "CAPSTONE" (3 cr) requirement.*

NOTE: This curriculum could be spread out over 4-6 semesters instead of just 3 as shown here. Students requiring extra help in terms of MCAT, GPA, volunteer work, research experience, and/or letters of recommendation are encouraged to spread this out over 4-6 semesters instead of the fast-track curriculum outline shown here since that would give them more time to sufficiently improve their credentials so that they will be more competitive for admission to medical, dental, and/or other schools in the health professions.

NEW BIOMEDICAL SCIENCES MS TRACK PROPOSAL

Program Administration and Teaching Requirements

1. Program will be administered as a specialized track under our Biomedical Science MS program (non-thesis)

2. IMS Coordinator (BSBS faculty) will directly oversee program administration and work closely with program leadership (Director and Associate Director of COM Graduate Programs), and faculty/staff/GTAs involved in the teaching/administration of the program.

3. All graduate courses proposed for the program currently exist. Thus, there is no need to create new courses or make additional teaching assignments for those courses.

4. For the two medical school courses listed (HB1 and HB3), we propose to open graduate sections for each of these. Graduate students admitted to the program would go to lectures with medical students and be instructed by the med-ed faculty teaching those modules. In addition, we would assign a faculty instructor to serve as the leader of the small group sessions. The content and problems covered in the small group sessions will be the same as those covered for the med students.

5. One GTA will be assigned from the MD/PhD program to assist with running the small group sessions.

6. Graduate students enrolled in these medical modules (HB1 and HB3) will be tested and graded using the same criteria and procedures used for the medical students.

7. We are seeking cost-recovery model for graduate tuition surcharge to cover the additional administrative costs to run this program.

From: Patrick Pabian
Sent: Wednesday, November 23, 2016 6:37 AM
To: Steven Ebert
Subject: RE: Follow-up on proposed MS/Cert program in Anatomy

Steve,
Just following up.

The meeting went very well and it was nice to get everyone together face-to-face to establish a greater familiarity. I think there is a lot of synergy that we can all build upon, and everyone felt that this certificate is of a different scope to and will compliment the IMS program. Saleh provided me with the necessary information on two courses that will be offered by BSBS(embryology and histology). We also assured everyone that DPT wants to work with you all on the IMS program and we will do our best to accommodate students. The volume of students we are able to work with is dependent upon that room renovations and fire coding thereafter, which is relatively unpredictable. However, we do anticipate a good increase in capacity and reserve some of those spots for IMS. Dr. Samasam also inquired about visits to the lab with students for prosection visualization, which we commonly do with numerous other programs both from within and external to UCF. Any of your faculty and students are definitely welcome for activities such as this. We take the opportunities to have our students teach others in this capacity.

The nice thing is that with this certificate, there is a good potential for more course offerings if needed as we could be training our own future adjuncts.

the certificate was submitted to COHPA's graduate services yesterday and should be coming through committees in the coming months.
Best,
-Patrick

Patrick S. Pabian PT, DPT, SCS, OCS, CSCS
Program Director

University of Central Florida
Department of Health Profession
Doctor of Physical Therapy Program
12805 Pegasus Drive
HPA 1 - Room 256
Orlando FL 32816-2205
407-823-3457
Patrick.pabian@ucf.edu

https://www.cohpa.ucf.edu/hp/physical-therapy-program/

University of Central Florida

Graduate Split-Level Class Action Request Form

The Graduate Council Curriculum Committee discourages the establishment of split-level classes. Graduate students are entitled to more challenging content, instruction, and assessment, which are difficult to provide in classes offered to undergraduates as well. Circumstances may compel a unit to propose a split-level class. In these cases, the proposal should indicate the reasons a split-level class is necessary and what long-term measures are being taken to provide undergraduates and graduates with appropriate coursework. In addition, it is important to differentiate each of the undergraduate and graduate course elements. To provide reviewers with a clear delineation of the differences between the 4000 and 5000 courses, Summary Tables 1 and 2 should be completed.

Please submit this form along with the completed Course Action Request (CAR) form. Include both the 4000 syllabus and the 5000 syllabus. The 5000 syllabus should bold any additions or differences.

What is the rationale for the split-level class?

For students in the Bachelor of Music and Master of Arts in Music degrees, a number of electives are offered in the academic areas of music, such as music history and music theory. However, few electives are offered in the performance area of music. This new course will offer a significant elective focused on the performance side of music.

Table 1— List any **course objectives or content:**

1) that is common to both the undergraduate and graduate syllabi but have been differentiated for undergraduate and graduate students. For example, an objective for undergraduates may require identification of a concept where the graduate objective may require application;

or

2) in cases where entirely new objectives or content have been added to the existing undergraduate objectives and content, in the 5000 course column list any course elements that the graduate syllabus requires in addition to the elements of the undergraduate syllabus. For example, if there are 3 course readings in the undergraduate syllabus and a 4th reading was added for the graduate syllabus, list it in the 5000 course column and leave the 4000 course column blank.

Table 1 Differences Between 4000 and 5000 Course Objectives and Content

Course Element	4000 Course	5000 Course
Individual student repertoire	appropriate for undergraduate level; please see attachment	appropriate for graduate level
Peer evaluations	appropriate for undergraduate level; please see attachment	appropriate for graduate level

Table 2—List different or additional **assessment** elements (course assignments and tests that count toward the grade). For example, if an undergraduate course assignment that requires students to read an article and write a reflection has been expanded to require graduate students to read a book and present it to the class, the two versions of this assignment would be contrasted in this table. If a third exam was added for graduate students, list it in the 5000 column.

Table 2 Differences Between 4000 and 5000 Course Assessment		
Course Element	**4000 Course Assessment and % of grade**	**5000 Course Assessment and % of grade**
Book report - written	one; 10% of grade	two; 10% of grade
Book report - oral	one; 5% of grade	two; 5% of grade
Mock audition	one; 15% of grade	two; 15% of grade
Peer evaluations	10; 20% of grade	15; 20% of grade

For more information, contact Dr. John Weishampel, Associate Dean, in the College of Graduate Studies.

Graduate Split-Level Class Action Request Form - Music Performance Workshop

Additional information: this course focuses on the artistic and musical development of the students. We recognize that this development progresses over a continuum and is not strictly differentiated between undergraduate and graduate levels. There are various musical and technical skills which can be developed in both groups of students.

Course Element:	**4000 Course:**	**5000 Course:**
Individual student repertoire	The choice of repertoire is guided by the applied studio instructor, and is chosen to be appropriate to the particular level of the student. Repertoire may be chosen to enhance recital preparation, and preparation for graduate school or professional auditions.	Choice of repertoire at the graduate level is influenced by professional goals, and includes solo, concerto, and orchestral material. Guidance is also provided by the studio teacher, if applicable. It is understood that the repertoire at the graduate level is a higher level than undergraduate.
Peer evaluations	The use of peer evaluations by undergraduate students allows them to understand performance from a more global view. Constructive criticism provided to others helps inform the individual student.	Many graduate students have significant experience in teaching, and the use of peer evaluations provides the opportunity to refine their skills. Given the higher level of experience, peer evaluations with greater insight will be expected.

MUS 4XXX: Music Performance Workshop
Music Department
College of Arts and Humanities, University of Central Florida

COURSE SYLLABUS

Instructor:	Si-Yan Darren Li	Term:	Fall 2017
Office:	Office Number	Class Meeting Days:	Days
Phone:	Phone for Office	Class Meeting Hours:	Time
E-Mail:	Instructor Email	Class Location:	Building and room
Website:	Instructor's personal website, if applicable	Lab Location:	Building and room
Office Hours:	Date and time		

I. Welcome!

Get ready to bring your performance to a new level!

II. University Course Catalog Description

Coaching and peer interaction for improvement of individual music performance.

III. Course Overview

Students will prepare musical works and bring them in to class. Through faculty coaching and peer interaction in a workshop setting, students will work for improvements in their performance.

IV. Course Objectives

By the end of this course, students will be able to:

- Perform with more confidence with less performance anxiety.
- Perform works at a higher musical level.
- Prepare for and perform auditions with confidence.
- Have experience in recording musical examples.

• Provide constructive comments to fellow performers.

V. Course Prerequisites
Students must have passed level I of applied music (MVX 1XXX).

VI. **Course Credits:** 3 hours; may be repeated for credit once, for a maximum of two times.

VII. Required Texts and Materials: none; individual music parts will be assigned from the student's repertoire.

VIII. Supplementary (Optional) Texts and Materials: none

IX. Basis for Final Grade

Assessment	Percent of Final Grade
Class performances	30%
Book Report - written	10%
Book Report - oral	5%
Mock audition	15%
10 Peer evaluations	20%
Final jury exam	10%
Attendance	10%
	100%

Grading Scale (%)	
94-100	A
90-93	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
0 - 59	F

X. Grade Dissemination

Grades for written work will be disseminated via Webcourses. Grades for class performances, mock audition, peer evaluations and final jury exam will be disseminated directly from the professor.

XI. Course Policies: Grades

Late Work Policy: Written work that is turned in late will be assessed a penalty: a half-letter grade if it is one day late, or a full-letter grade for 2-7 days late. It will not be accepted if overdue by more than seven days.

Extra Credit Policy: No extra credit will be available in this course.

Grades of "Incomplete": The current university policy concerning incomplete grades will be followed in this course. Incomplete grades are given only in situations where unexpected emergencies prevent a student from completing the course and the remaining work can be completed the next semester. Your instructor is the final authority on whether you qualify for an incomplete. Incomplete work must be finished by the end of the subsequent semester or the "I" will automatically be recorded as an "F" on your transcript.

XII. Course Policies: Technology and Media

Email: this is the preferred method of communication with the professor.

Webcourses: Written work will be submitted through Webcourses.

Classroom Devices: electronic devices may be used for recording audio and video in class.

XIII. Course Policies: Student Expectations

Disability Access: The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students who need accommodations must be registered with Student Disability Services, Ferrell Commons Room 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.

Attendance Policy: Since this is a participatory class, attendance is required. One unexcused absence is allowed. After that, each unexcused absence will result in a grade reduction of 2%.

Professionalism Policy: Per university policy and classroom etiquette; mobile phones, iPods, *etc*. **must be silenced** during all classroom and lab lectures. Those not heeding this rule will be

asked to leave the classroom/lab immediately so as to not disrupt the learning environment. Please arrive on time for all class meetings. Students who habitually disturb the class by talking, arriving late, *etc*., and have been warned may suffer a reduction in their final class grade.

Academic Conduct Policy: Academic dishonesty in any form will not be tolerated. If you are uncertain as to what constitutes academic dishonesty, please consult The Golden Rule, the University of Central Florida's Student Handbook (http://www.goldenrule.sdes.ucf.edu/) for further details. As in all University courses, The Golden Rule Rules of Conduct will be applied. Violations of these rules will result in a record of the infraction being placed in your file and receiving a zero on the work in question AT A MINIMUM. At the instructor's discretion, you may also receive a failing grade for the course. Confirmation of such incidents can also result in expulsion from the University

Turinitin.com: In this course we will utilize turnitin.com, an automated system which instructors can use to quickly and easily compare each student's assignment with billions of web sites, as well as an enormous database of student papers that grows with each submission. Accordingly, you will be expected to submit all assignments in both hard copy and electronic format. After the assignment is processed, as instructor I receive a report from turnitin.com that states if and how another author's work was used in the assignment. For a more detailed look at this process visit http://www.turnitin.com. Essays are due at turnitin.com the same day as in class.

University Writing Center: The University Writing Center (UWC) is a free resource for UCF undergraduates and graduates. At the UWC, a trained writing consultant will work individually with you on anything you're writing (in or out of class), at any point in the writing process from brainstorming to editing. Appointments are recommended, but not required. For more information or to make an appointment, visit the UWC website at http://www.uwc.ucf.edu, stop by MOD 608, or call 407.823.2197.

XIV. Important Dates to Remember

Drop/Swap Deadline:
Grade Forgiveness Deadline:
Mid – Term Examination:
Withdrawal Deadline:
Spring Break:
Final Examination:

Religious Observances

Students are expected to notify their instructor in advance if they intend to miss class to observe a holy day of their religious faith.

XV. Assignments

A. Class performances

Students will select musical works from their current or future study, such as arias, sonatas, concertos, orchestral excerpts, and audition repertoire. After preparing a given work outside of class, the student will perform the work in class. The professor will offer coaching and suggestions for the student as in a masterclass setting, and other students in the class will make written and verbal evaluations for improvement.

B. Book report

Students will select one book from a list of books on the subject of music performance, performance anxiety, and similar topics. Each student will select a different book. A written book report of 1000 words will be submitted, by the end of the seventh week of the semester. A verbal report of at least 5 minutes will be presented to the class, in a schedule to be determined by the professor. In this way, the material in the book may be shared with all the members of the class.

Examples:
Bonetti, Ruth. Taking Centre-Stage; How to Survive and Enjoy Performing in Public. Albatross Books, 1997.

Bruser, Madeline. The Art of Practicing; A Guide to Making Music from the Heart. Bell Tower Books, 1997

Buswell, David. Performance Strategies for Musicians. MX Publishing, 2006.

Green, Barry. The Inner Game of Music. Anchor Press, 1986.

Stohrer, Sharon L. The Performer's Companion: Conquering Performance Anxiety. CreateSpace Independent Publishing Platform, 2014

C. Mock Audition

In consultation with the instructor, each student will select appropriate repertoire for a mock audition. The student will have one or more preparation coachings in class on the material. Audition skills will be discussed. At a suitable time, the student will perform the mock audition behind a screen. Grading will be provided through a rubric for this assignment.

D. Peer evaluations

Based on student performances in class, other students will complete written peer evaluations. Expectations and skills for the evaluations will be discussed in class. Students will provide observations of the performing student, evaluation of progress, and constructive criticism for improvement. This assignment will provide training for future teaching by students. The evaluations will be graded by a rubric.

E. Final jury performance

Using musical works used during the semester, each student will perform a final jury performance. Students will be graded according to musical goals, improvement, and attention to suggestions. This will take place during the final exam period for the class.

MUS 5XXX: Music Performance Workshop
Music Department
College of Arts and Humanities, University of Central Florida

COURSE SYLLABUS

Instructor:	Si-Yan Darren Li	Term:	Fall 2017
Office:	Office Number	Class Meeting Days:	Days
Phone:	Phone for Office	Class Meeting Hours:	Time
E-Mail:	Instructor Email	Class Location:	Building and room
Website:	Instructor's personal website, if applicable	Lab Location:	Building and room
Office Hours:	Date and time		

I. Welcome!

Get ready to bring your performance to a new level!

II. University Course Catalog Description

Coaching and peer interaction for improvement of individual music performance.

III. Course Overview

Students will prepare musical works and bring them in to class. Through faculty coaching and peer interaction in a workshop setting, students will work for improvements in their performance.

IV. Course Objectives

By the end of this course, students will be able to:

- Perform with more confidence with less performance anxiety.
- Perform works at a higher musical level.
- Prepare for and perform auditions with confidence.
- Have experience in recording musical examples.

• Provide constructive comments to fellow performers.

V. Course Prerequisites
Admission to Music MA program or C.I.

VI. **Course Credits:** 3 hours; may be repeated for credit once, for a maximum of two times.

VII. Required Texts and Materials: none; individual music parts will be assigned from the student's repertoire.

VIII. Supplementary (Optional) Texts and Materials: none

IX. Basis for Final Grade

Assessment	Percent of Final Grade
Class performances	30%
Book Report I and II- written	10%
Book Report I and II- oral	5%
2 Mock auditions	15%
15 Peer evaluations	20%
Final jury exam	10%
Attendance	10%
	100%

Grading Scale (%)	
94-100	A
90-93	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
0 - 59	F

X. Grade Dissemination

Grades for written work will be disseminated via Webcourses. Grades for class performances, mock audition, peer evaluations and final jury exam will be disseminated directly from the professor.

XI. Course Policies: Grades

Late Work Policy: Written work that is turned in late will be assessed a penalty: a half-letter grade if it is one day late, or a full-letter grade for 2-7 days late. It will not be accepted if overdue by more than seven days.

Extra Credit Policy: No extra credit will be available in this course.

Grades of "Incomplete": The current university policy concerning incomplete grades will be followed in this course. Incomplete grades are given only in situations where unexpected emergencies prevent a student from completing the course and the remaining work can be completed the next semester. Your instructor is the final authority on whether you qualify for an incomplete. Incomplete work must be finished by the end of the subsequent semester or the "I" will automatically be recorded as an "F" on your transcript.

XII. Course Policies: Technology and Media

Email: this is the preferred method of communication with the professor.

Webcourses: Written work will be submitted through Webcourses.

Classroom Devices: electronic devices may be used for recording audio and video in class.

XIII. Course Policies: Student Expectations

Disability Access: The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students who need accommodations must be registered with Student Disability Services, Ferrell Commons Room 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.

Attendance Policy: Since this is a participatory class, attendance is required. One unexcused absence is allowed. After that, each unexcused absence will result in a grade reduction of 2%.

Professionalism Policy: Per university policy and classroom etiquette; mobile phones, iPods, *etc*. **must be silenced** during all classroom and lab lectures. Those not heeding this rule will be

asked to leave the classroom/lab immediately so as to not disrupt the learning environment. Please arrive on time for all class meetings. Students who habitually disturb the class by talking, arriving late, *etc*., and have been warned may suffer a reduction in their final class grade.

Academic Conduct Policy: Academic dishonesty in any form will not be tolerated. If you are uncertain as to what constitutes academic dishonesty, please consult The Golden Rule, the University of Central Florida's Student Handbook (http://www.goldenrule.sdes.ucf.edu/) for further details. As in all University courses, The Golden Rule Rules of Conduct will be applied. Violations of these rules will result in a record of the infraction being placed in your file and receiving a zero on the work in question AT A MINIMUM. At the instructor's discretion, you may also receive a failing grade for the course. Confirmation of such incidents can also result in expulsion from the University

Turinitin.com: In this course we will utilize turnitin.com, an automated system which instructors can use to quickly and easily compare each student's assignment with billions of web sites, as well as an enormous database of student papers that grows with each submission. Accordingly, you will be expected to submit all assignments in both hard copy and electronic format. After the assignment is processed, as instructor I receive a report from turnitin.com that states if and how another author's work was used in the assignment. For a more detailed look at this process visit http://www.turnitin.com. Essays are due at turnitin.com the same day as in class.

University Writing Center: The University Writing Center (UWC) is a free resource for UCF undergraduates and graduates. At the UWC, a trained writing consultant will work individually with you on anything you're writing (in or out of class), at any point in the writing process from brainstorming to editing. Appointments are recommended, but not required. For more information or to make an appointment, visit the UWC website at http://www.uwc.ucf.edu, stop by MOD 608, or call 407.823.2197.

XIV. Important Dates to Remember

Drop/Swap Deadline:
Grade Forgiveness Deadline:
Mid – Term Examination:
Withdrawal Deadline:
Spring Break:
Final Examination:

Religious Observances

Students are expected to notify their instructor in advance if they intend to miss class to observe a holy day of their religious faith.

XV. Assignments

A. Class performances

Students will select musical works from their current or future study, such as arias, sonatas, concertos, orchestral excerpts, and audition repertoire. The works chosen will be appropriate for graduate level repertoire. After preparing a given work outside of class, the student will perform the work in class. The professor will offer coaching and suggestions for the student as in a masterclass setting, and other students in the class will make written and verbal evaluations for improvement.

B. Book report

Students will select two books from a list of books on the subject of music performance, performance anxiety, and similar topics. Each student will select a different book. A written book report of 1000 words will be submitted for each book, by the end of the seventh week of the semester. For each book, a verbal report of at least 5 minutes will be presented to the class, in a schedule to be determined by the professor. In this way, the material in the book may be shared with all the members of the class.

Examples:
Bonetti, Ruth. Taking Centre-Stage; How to Survive and Enjoy Performing in Public. Albatross Books, 1997.

Bruser, Madeline. The Art of Practicing; A Guide to Making Music from the Heart. Bell Tower Books, 1997

Buswell, David. Performance Strategies for Musicians. MX Publishing, 2006.

Green, Barry. The Inner Game of Music. Anchor Press, 1986.

Stohrer, Sharon L. The Performer's Companion: Conquering Performance Anxiety. CreateSpace Independent Publishing Platform, 2014

C. Mock Audition

In consultation with the instructor, each student will select appropriate repertoire for two mock auditions. The student will have one or more preparation coachings in class on the material. Audition skills will be discussed. At a suitable time, the student will perform the mock auditions behind a screen. Grading will be provided through a rubric for this assignment.

D. Peer evaluations

Based on student performances in class, other students will complete written peer evaluations. Expectations and skills for the evaluations will be discussed in class. Students will provide observations of the performing student, evaluation of progress, and constructive criticism for

improvement. This assignment will provide training for future teaching by students. The evaluations will be graded by a rubric.

E. Final jury performance

Using musical works used during the semester, each student will perform a final jury performance. Students will be graded according to musical goals, improvement, and attention to suggestions. This will take place during the final exam period for the class.

Course Agenda – March 22, 2017 Meeting

1. Course Additions

College of Arts and Humanities Course Additions

CRW 6XXX **CAH-ENG** **3(3,0)**
Professional Development in Creative Writing: PR: Graduate standing or C.I. Professional development lectures, discussions, and hands-on activities to assist graduate students in preparing for successful careers in writing, editing/publishing, and teaching. *Fall.*
Abbrev: (23 of 30 chars) Professional Dev in CRW
Discussion with others: None. This is specifically designed for MFA students in creative writing, with units in creative writing pedagogy, literary arts administration, editing/publishing, and other creative writing career paths.
Rationale: There is a need in the program to provide practical guidance to students for careers as writers, as editors/publishers, and as teachers of creative writing in a variety of settings. This course will better prepare more of our students for various career paths.
Majors taking course: MFA Creative Writing

MUS 5XXX **CAH-MUSIC** **3(3,0)**
Music Performance Workshop: PR: Admission to Music MA or C.I. Individual coaching and study of the art of music performance, including mock auditions and performances. *Spring, Summer, Fall.*
Abbrev: (26 of 30 chars) Music Performance Workshop
Repeat For Credit: True Max Times: 2
Discussion with others: None.
Rationale: While the department offers a number of elective courses in the academic areas of music, such as music history and music theory, there are few choices in the performance area. This course will be a significant elective for students interested in music performance.
Majors taking course: Music MA students

College of Health and Public Affairs Course Additions

PAD 6XXX **HPA-PUB** **3(3,0)**
Hazard Analysis and Disaster Planning: PR: Graduate standing; School of Public Administration Major. Examines geospatial aspects of hazards analysis and planning with reference to disaster preparedness, recovery, mitigation, and resilience. *Occasional.*
Abbrev: (29 of 30 chars) Hazard Analysis Disaster Plan
Discussion with others: None required
Rationale: Essential knowledge for students in EMHS and planning majors who wish to work in the field
Majors taking course: None

College of Sciences Course Additions

PCB 5XXX **COS-BIOL** **3(3,0)**
Wildlife Genomics: PR: Graduate student in Biology MS or Conservation Biology PhD. Understanding of how Genomic methods are applied to problems in wildlife biology, with an emphasis on vertebrate animal species in terrestrial and marine ecosystems. *Odd Fall.*
Abbrev: (17 of 30 chars) Wildlife Genomics
Discussion with others: None.
Rationale: Much needed addition to the graduate and undergraduate curriculum.
Majors taking course: None.

MAP 5XXX **COS-MATH** **3(3,0)**
Computational Methods for Financial Mathematics I: PR: Admission to the Financial Mathematics Track in the M.S. in Mathematical Sciences, or C.I. Numerical modeling, Numerical solutions, stability issues for Ordinary and Partial Differential Equations within the setting of financial mathematics. *Fall.*
Abbrev: (22 of 30 chars) Comp Method Fin Math I
Discussion with others: Discussions have taken place with the Department of Finance. see the attached letter.
Rationale: This is a required course for the new Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics.
Majors taking course: Mathematical Science MS - Financial Mathematics Track

MAP 5XXX **COS-MATH** **3(3,0)**
Differential Equations for Financial Mathematics: PR: MAP 4341 or C.I. Initial value problem, terminal value problem, existence and uniqueness, Gronwall's inequality, linear system theory, parabolic PDE, elliptic PDE, basic regularity theory, maximum principle, stability. *Fall.*
Abbrev: (22 of 30 chars) Diff Eq Financial Math
Discussion with others: Discussions have taken place with the Department of Finance. see the attached letter.
Rationale: This is a required course for the new Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics.
Majors taking course: Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics

MAP 5XXX **COS-MATH** **3(3,0)**
Financial Mathematics I: PR: MAP 5XXX (Computational Methods for Financial Mathematics I), or C.I. Single-period market, arbitrage, risk-neutral probability measure, market completeness, mean-variance portfolio analysis, multi-period market, binomial tree, contingent claim pricing. *Fall.*
Abbrev: (23 of 30 chars) Financial Mathematics I
Discussion with others: Discussions have taken place with the Department of Finance. see the attached letter.

Rationale: This is a required course for the new Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics.
Majors taking course: Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics

MAP 5XXX COS-MATH 1(2,0)
Prosemiar for Financial Mathematics: PR: Admission to the Financial Mathematics Track in the M.S. in Mathematical Sciences, or C.I. Seminar to develop basic career skills in Financial Mathematics. *Odd Fall.*
Abbrev: (25 of 30 chars) Proseminar Financial Math
Discussion with others: Discussions have taken place with the Department of Finance. see the attached letter.
Rationale: This is a required course for the new Financial Mathematics tracks for the MS in Mathematical Sciences.
Majors taking course: Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics

MAP 5XXX COS-MATH 2(2,0)
Seminar in Financial Mathematics: PR: MAP 5XXX (Proseminar in Financial Mathematics), or C.I. Seminar to develop advanced career skills in Financial Mathematics. *Odd Fall.*
Abbrev: (22 of 30 chars) Seminar Financial Math
Discussion with others: Discussions have taken place with the Department of Finance. see the attached letter.
Rationale: This is a required course for the new Financial Mathematics tracks for the MS in Mathematical Sciences.
Majors taking course: Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics

MAP 6XXX COS-MATH 3(3,0)
Computational Methods for Financial Mathematics II: PR: MAP 5XXX (Computational Methods for Financial Mathematics I), or C.I. Monte-Carlo methods, Numerical aspects of stochastic differential equations. *Spring.*
Abbrev: (27 of 30 chars) Comp Meth Financial Math II
Discussion with others: Discussions have taken place with the Department of Finance. see the attached letter.
Rationale: This is a required course for the new Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics.
Majors taking course: Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics

MAP 6XXX COS-MATH 3(3,0)
Financial Mathematics II: PR: MAP 5XXX Financial Mathematics I, or C.I. Theoretical discussion of Stochastic processes, Brownian motion, Ito's integral, Ito's formula, martingales, Girsanov's transformation, stochastic differential equations, option pricing. *Spring.*
Abbrev: (17 of 30 chars) Financial Math II

Discussion with others: Discussions have taken place with the Department of Finance. see the attached letter.
Rationale: This is a required course for the new Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics.
Majors taking course: Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics

MAP 6XXX **COS-MATH** **3(3,0)**
Risk Management for Financial Mathematics: PR: MAP 5XXX (Financial Mathematics I), or C.I. Credit risk, counter party credit risk, securitizations, market risk, operational risk, asset liability management, Basel III regulations. *Fall.*
Abbrev: (30 of 30 chars) Risk Management Financial Math
Discussion with others: Discussions have taken place with the Department of Finance. see the attached letter.
Rationale: This is a required course for the new Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics.
Majors taking course: Financial Mathematics tracks for the MS in Mathematical Sciences and the PhD in Mathematics

GLY 5XXX **COS-PHYS** **3(3,0)**
Marine Geoscience: PR: Graduate standing or C.I. Examination of the physical processes operating in the world ocean; marine tectonics, ocean history; marine sediments; ocean circulation; marine energy; sea-level change; marine research methods. *Odd Fall.*
Abbrev: (17 of 30 chars) Marine Geoscience
Discussion with others: There are no known comparable courses in the university curriculum. The course syllabus was provided to Dr. Graham Worthy, chair of the Biology Department. He said that the department would support the course and sees minimal overlap with the department's undergraduate Oceanography course (OCE 3008).
Rationale: There is increasing interest in enhancing UCF's geoscience offerings, and in particular those related to marine science. This course represents one of the fundamental topics in geoscience and should be of interest to many students in the physical and life sciences and engineering. EM attached.
Majors taking course: None

POS 5XXX **COS-POLS** **3(3,0)**
Civic Engagement: PR: Graduate standing or C.I. Civic engagement in local, state, national and international contexts focusing on academic and practical applications, public problem solving, and political rights and responsibilities fostering civic engagement. *Summer.*
Abbrev: (16 of 30 chars) Civic Engagement
Discussion with others: Public Administration

Rationale: The political science department presently offers an undergraduate certificate in civics teaching. One of the required courses for that certificate is POS 3272-Civic Engagement.. The target population for the undergraduate civics teaching certificate is students pursuing the B.S. in Social Science Education. The proposed course will be part of a graduate certificate in civics teaching (to be proposed) that will support social science education and political science graduate programs, as well as practicing social studies teachers pursuing the certificate only and post-baccalaureate students pursuing alternate social studies teacher certification who will be enrolled in the graduate civics teaching certificate.
Majors taking course: None

2. Special Topics Additions

College of Engineering and Computer Science Special Topics Additions

BME 5937 **ECS-MECH/AERO** **3(3,0)**
Transport Phenomena in Biomedical Engineering: PR: EML 3701 and EML 4142. Principles of heat, mass and momentum transfer, and their relevance and application to biomedical systems. The scope will cover derivation of the transport equations and compilation of physiologic and imaging data into models predictive of cardiopulmonary organs, and application of computational fluid dynamics technique. A project will be assigned requiring students to develop and present a technical report on a current bioengineering problem. *Occasional.*
Abbrev: (30 of 30 chars) Transport Phenomena Biomed Eng

College of Health and Public Affairs Special Topics Additions

PAD 6938 **HPA-PUB** **3(3,0)**
Hazards Analysis and Disaster Planning: PR: Graduate Standing or C.I. Geo-special aspects of hazards analysis and planning with specific reference to disaster preparedness, recovery, mitigation and resilience. *Occasional.*
Abbrev: (26 of 30 chars) Hazard Analysis &Dist Plan
Discussion with others: None

3. Course Revisions

College of Arts and Humanities Course Revisions

SPN 5705 ~~**Introduction to Spanish Linguistics**~~ **Spanish Psycholinguistics** **3(3,0)**
PR: Graduate ~~status or senior~~ standing or C.I.

~~An introduction to main concepts~~ Explores introductory topics in Spanish psycholinguistics research, including bilingual language production, comprehension, acquisition, and ~~methods of analyses focusing on Spanish morphology, syntax, semantics, and phonology as well as dialectology and sociolinguistics.~~ development.

Abbrev (25 of 30): ~~Intro to Spanish Linguistics~~ Spanish Psycholinguistics

Term Offered: ~~Even Fall~~ Occasional

Discussion with others: There is not a course with the same name at UCF. There are no expected conflicts with other departments (i.e., Psychology, Communication Disorders, English) based on catalog descriptions.

Rationale: The MA Spanish program is creating this new course to give the students the opportunity to learn about a current trending line in the study of Spanish linguistics and/or facilitate their transition to competitive Ph.D. programs.

Majors taking course: MA Spanish Students

There is 1 program that lists SPN 5705: Spanish (B.A.)

College of Health and Public Affairs Course Revisions

PAF 7858	**Advanced Seminar in Governance and Policy Research**	**3(3,0)**

PR: ~~PAF 7000, PAF 7300, PAF 7806~~ Admission to Public Affairs Ph.D. Program or C.I.

Integrates theoretical and methodological applications to public policy analysis, particularly related to environmental, science and technological, health and welfare impacts.

There are no programs that list PAF 7858.

4. Course Deletions

5. Course Continuations

Graduate Certificate Report 2014-2016

College	Program	Term Established	2014 Total Enroll	2014 Grads	2015 Total Enroll	2015 Grads	2016 Total Enroll	2016 Grads	Status Notes
CAH	Engl - Prof Writing - Cert	Fall 1998	25	7	26	8	26	1	
CAH	Theoret & App Ethics Cert	Fall 2002	2				2		
CAH	Tch Eng As a For Lang - Cert	Spring 1999	32	18	38	20	39	10	
CAH	ESOL Endorsement K-12 - Cert	Spring 2003	16	12	2		5	1	
CAH	Gender Studies - Cert	Fall 1999	12	1	18	6	16		
CBA	Entrepreneurship Cert	Fall 2006	22	5	24	5	29	2	
CBA	Technology Ventures Cert	Fall 2006	15	5	24	8	17	3	Suspended Summer 2017
COHPA	Medical Spch/Lang Path Cert	Fall 2002	2	1	1				
COHPA	CJ - Crime Analysis - Cert	Fall 1998	20	9	24	7	20	5	
COHPA	CJ - Corrections Leadrshp Cert	Fall 2002	5	1	6		10	2	
COHPA	CJ - Executive Cert	Fall 2014	4	1	3	2	2	1	
COHPA	CJ - Juvenile Justice Lead Crt	Fall 2002	15	2	16	4	13	3	
COHPA	CJ - Police Leadership Cert	Fall 2002	46	23	33	12	33	14	
COHPA	Fundraising Cert	Fall 2013	20	6	19	10	22	2	
COHPA	Global Health Public Aff Cert	Spring 2017					2		
COHPA	Health Information Admin Cert	Fall 2015			1		1	1	
COHPA	Military Social Work - Cert	Summer 2013	47	24	51	15	34	11	
COHPA	SW - Administration Cert	Fall 2004							Suspended Summer 2014
COHPA	SW - Aging Studies Grad Cert	Spring 1999							Suspended Fall 2010
CON	Cln Nrs Spec Adlt-Geron Cert	Spring 2011							Suspended Spring 2014
CON	DNP-Family Nurse Pract Cert	Spring 2011	4	1	4	1	3		
CON	DNP-A/G Prim Care Nrs Prac Crt	Spring 2011	3	1	1	1			
CON	NU-A/G Acute Care Nurs Cert	Fall 2016					1		
CON	NU-Adult Nurse Pract-Cert	Fall 1998							Suspended Spring 2010
CON	NU-Clinical Nurse Spec Cert	Fall 2006							Suspended Spring 2010
CON	NU-Family Nurse Pract-Cert	Fall 1998							Suspended Spring 2010
CON	NU-Nursing Educ-Cert	Spring 2000	4	1	4		12	3	
CON	NU-Health Care Sim-Cert	Fall 2016					14		
CON	NU-Clinical Nurse Leader Cert	Fall 2008							Suspended Fall 2013
COS	AS - Maya Studies - Cert	Summer 1999	9	2	7	3	7	1	Inactive

March 22, 2017 - Review green highlighted certificates established in the following years: 2001, 2004, 2007, 2010, 2013.

Graduate Certificate Report 2014-2016

College	Program	Term Established	2014 Total Enroll	2014 Grads	2015 Total Enroll	2015 Grads	2016 Total Enroll	2016 Grads	Status Notes
COS	Bio -Conservation Biology-Cert	Fall 1999	4	1	4		2		
COS	Corporate Communication Cert	Spring 2012	41	16	30	12	35	7	
COS	Mathematical Science Cert	Fall 2009	19	2	17	3	31	1	
COS	Intelligence & Nat Sec Cert	Fall 2015			10	1	14	4	
COS	ST - SAS Data Mining - Cert	Fall 2000	27	4	24	1	28	4	
EDUC	Adv Quant Method in EHS Cert	Summer 2015			5	4	18	2	
EDUC	Autism Spectrum Disorders Cert	Fall 2005	131	29	119	45	119	49	
EDUC	CI-Community College Educ Cert	Spring 2000	21	2	30	7	25	8	
EDUC	CI-Foreign Language Ed Cert	Fall 2002							Inactive
EDUC	CI - Gifted Education Cert	Fall 2003	13	3	20	4	16	2	
EDUC	CI-Middle Level Education Cert	Fall 2001							Inactive
EDUC	CI-Professoriate EdD Cert	Fall 2002							Inactive
EDUC	CI-Professoriate EdD Cert	Fall 2002							Inactive
EDUC	CI-Teaching Excellence Cert	Summer 1999							Inactive
EDUC	CI-Teaching Excellence Cert	Summer 1999							Inactive
EDUC	CI - Urban Education Cert	Summer 2003	3	1	1	1			Reactivated Summer 2017
EDUC	Couns Ed - Career Couns Cert	Fall 2003	5	2	1		1		Suspended Summer 2014
EDUC	CouEd-Marr,Coupl,Fam Thrp Cert	Fall 2001	54	30	68	30	29	9	
EDUC	Couns Ed - Play Therapy - Cert	Fall 2001	35	9	28	13	18	1	
EDUC	ED - e-Learning Prof Dev Cert	Spring 2004	26	7	24	4	25	4	
EDUC	Global, Int'l & Cmpartv Ed Crt	Summer 2006	6		8	2	7	1	
EDUC	K-8 Math & Science Ed Cert	Summer 2006							
EDUC	ED - Online Educ Media Cert	Summer 2004							Inactive
EDUC	ED - Stdnt Athlete SS Cert	Fall 2014							Suspended Summer 2015
EDUC	Severe/Profound Disabl Cert	Spring 2008	4	2	12	6	7	6	
EDUC	Instruct Desgn Simulation Cert	Fall 2005	26	9	29	9	25	4	
EDUC	Intervention Specialist Cert	Summer 2013	4		24	12	25	4	
EDUC	IT/M - Instr/Educ Tech Cert	Summer 2001	12	4	11	2	10	1	
EDUC	Math and Science Educator Cert	Summer 2015							
EDUC	Prekindergrtn Disabilities Crt	Summer 2013	2		2		10		

March 22, 2017 - Review green highlighted certificates established in the following years: 2001, 2004, 2007, 2010, 2013.

Graduate Certificate Report 2014-2016

College	Program	Term Established	2014 Total Enroll	2014 Grads	2015 Total Enroll	2015 Grads	2016 Total Enroll	2016 Grads	Status Notes
EDUC	Social Scienc Educ Cert	Summer 2010	16		12		8		
EDUC	WLE-Lang Other Than Engl Cert	Fall 2013	1				2		
EDUC	WLE - ESOL Cert	Fall 2013		1	1		2		
ENGR	CE - Structural Engr - Cert	Fall 1998	6	3	4	1	2		
ENGR	CE - Transportation Engr -Cert	Fall 1998	7	1	5	2	4		
ENGR	IE - Applied Oper Rsrch - Cert	Fall 1998	11	7	6	3	5	1	
ENGR	IE -Design for Usability -Cert	Fall 1998	5	1	3		5		
ENGR	IE - Indst Ergo & Safety -Cert	Fall 1998	1		1				Inactive
ENGR	IE - Project Engineering -Cert	Fall 1998	23	9	17	4	25	3	
ENGR	IE - Quality Assurance - Cert	Fall 1998	16	12	7	4	9	4	
ENGR	IE - Systems Engineering Cert	Fall 2008	6	2	7	1	9	2	
ENGR	IE - Training Simulation -Cert	Fall 1998	10	4	12	7	6	3	
ENGR	IC - Computer Forensics Cert	Fall 2001	8	4	10	3	15	2	
GRDST	Geographic Info Sysms Cert	Fall 2016					10		
GRDST	Mod & Sim of Beh Cyber Cert	Fall 2015			13		18	11	
GRDST	Mod & Sim of Tech Systs Cert	Summer 2012	6	2	8	1	5	1	
HSPMG	Destination Mrktg & Mgmt Cert	Fall 2015			6		24	7	
HSPMG	Event Management Certificate	Fall 2015			19	2	40	8	
HSPMG	Hospitality Mgt Cert	Fall 2010							Suspended Fall 2013

March 22, 2017 - Review green highlighted certificates established in the following years: 2001, 2004, 2007, 2010, 2013.