Graduate Council Curriculum Committee
October 15, 2009
12:30 p.m., MH 243
REVISED

Agenda

1. Welcome and call to order

2. Reactivation of the MFA Theatre Acting Track beginning fall 2010

3. Program revision to Masters in Nonprofit Management beginning summer 2010, COHPA – increasing credit hours from 33 to 36

4. Addition of a joint degree program combining the Master of Public Administration and the Master of Nonprofit Management, COHPA effective summer 2010

5. Addition of two split classes for the College of Sciences: PCB 5935 and BSC 5332

6. Courses and special topics

7. Adjournment

Informational Item

1. Addition of an MEd in Teacher Leadership

Members of the Graduate Council Curriculum Committee:

Deborah Breiter, RCHM
Naim Kapucu, COHPA
Ram Mohapatra, COS – Chair
Joyce Nutta, COE
Tison Pugh, CAH
Martin Richardson, COP
Susan Chase, CON
Sergio Tafur, GSA
James Turkson, COM
Art Weeks, CECS
Patricia Bishop, Ex Officio for CGS
Max Poole, Liaison for CGS

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs.

College/Unit(s) Submitting Proposal: College of Arts & Humanities **Proposed Effective Term/Year:** Fall 2010

Unit(s) Housing Program: Department of Theatre

Name of Program and/or track: Theatre MFA - Acting Track

Brief Statement of Program Change: (for suspensions or deletions of degree programs, tracks or certificates, please attach on a separate sheet the rationale for this action, including statement of how this action impacts faculty teaching in and students enrolled in the program, track or certificate. Please note the units that have been consulted if duplication of programs or conflict of interest with other units has occurred.)

NOTE: THIS IS A REQUEST TO REACTIVATE A TRACK CURRENTLY ON TEMPORARY SUSPENSION

Please check one: this action affects a: ☐ Program ■ Track ☐ Certificate

Please check one: this action is a(n): ■ Addition ☐ Inactivation ☐ Deletion ☐ Revision
☐ Temporary Suspension of Admissions: Length of Suspension _____

Temporary suspension of admissions: the program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions.

Inactivation: the program will be removed from the online application. Admissions will be suspended to new students. A notation will be entered in the catalog to indicate that the program is being deleted. If students are currently in the program, the program will remain in the graduate catalog. Once the last students have graduated, the program will be removed from the catalog.

Deletions: the program will be removed from the online application. Admissions will be suspended to new students. A notation will be entered in the catalog to indicate that the program is being deleted. If students are currently in the program, the program will remain in the graduate catalog. Once the last students have graduated, the program will be removed from the catalog and deleted in all university records.

For program, track, or certificate additions or revisions:

1. **Will students be moved from an existing program or track into this new program or track?** ☐ Yes ■ No
   If yes, state the name of the program or track where students are currently enrolled: _____
2. **Are you changing the name of an existing program or track?** ☐ Yes ■ No
   If yes, provide the new name of the program or track: _____
   Provide the name of the current program or track: _____
   When is the name change effective? _____
   Please Note: A name change will be effective on all diplomas on the effective date of change. This may affect students currently enrolled or those newly admitted.
3. **Are you requesting a CIP Code change?** ☐ Yes ■ No
   If yes, old CIP _____ new CIP _____
4. **A "marked up" catalog copy MUST be included showing the changes for the existing description.**

For program, track, and certificate inactivation or deletions:

1. **Are students currently enrolled in the program?** ■ Yes ☐ No
2. **If yes, attach a "teach out" plan for all current students specifying how they can finish the program or where students will be placed if being moved to another program. The " teach out" plan should specify when courses will be offered to enable students to finish.**

RECOMMENDATIONS

☒ Yes ☐ No
Department Chair: SEE ATTACHED **Date:** _____

☒ Yes ☐ No
College Curriculum Committee Chair: [signature] **Date:** 10/2/09

☒ Yes ☐ No
College Dean or Unit Head: [signature] **Date:** 10/2/09

☐ Yes ☐ No
Chair, UPCC or GSC: _____ **Date:** _____

☐ Yes ☐ No
Dean, Undergraduate Studies or Graduate Studies: _____ **Date:** _____

Approval:

Provost: _____ **Date:** _____

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

☐ Department(s)	☐ Associate Registrar	☐ Faculty Senate
☐ College	☐ Institutional Research	☐ Information, Analysis & Assessment
☐ Registrar	☐ Academic Services	

programs, tracks, or certificate programs.

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

College/Unit(s) Submitting Proposal: College of Arts and Humanities **Proposed Effective Term/Year:** Fall 2010

Unit(s) Housing Program: Department of Theatre **Name of Program:** MFA in Acting

Brief Statement of Program Change: (for suspensions or deletions of degree programs, tracks or certificates, please attach on a separate sheet the rationale for this action, including statement of how this action impacts faculty teaching in and students enrolled in the program, track or certificate. Please note the units that have been consulted if duplication of programs or conflict of interest with other units has occurred.)

Please check one: this action affects a: ☐ Program ☑ Track ☐ Certificate

Please check one: this action is a(n): ☑ Addition ☐ Suspension ☐ Deletion ☐ Revision

RECOMMENDATIONS

☑ Yes ☐ No
Department Chair: Christopher Vitas **Date:** 9/28/09

☐ Yes ☐ No
College Curriculum Committee Chair: **Date:**

☐ Yes ☐ No
College Dean or Unit Head: **Date:**

☐ Yes ☐ No
Chair, UPCC or GSC: **Date:**

☐ Yes ☐ No
Dean, Undergraduate Studies or Graduate Studies: **Date:**

Approval:
Provost: **Date:**

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_____ Institutional Research _____Academic Services _____Faculty Senate _____Information, Analysis & Assessment

University of Central Florida

Department of Theatre

September 28, 2009

Patricia Bishop, Dean
College of Graduate Studies
University of Central Florida
Orlando, Fl 32816-0112

Dear Dr. Bishop,

The Department of Theatre requests the reactivation of the MFA in Theatre, Acting Track. As a result of the re-assignment of faculty loads in the department, we are able to reactive this track beginning Fall 2010. This track was put on hold last year due to the departure of several faculty members as well as severe financial constraints. The reactivation of the MFA Acting track will allow the department to continue the MFA program and enhance the existing MA program in Theatre.

Sincerely,

Christopher Niess
Chair and Artistic Director

12501 Research Parkway, Suite 180 • P.O. Box 162372 • Orlando, FL 32816-2372 • (407) 823-2862 • FAX (407) 823-6446

From: Patricia Bishop
To: Rhonda Nelson
Date: 10/7/2009 7:57 PM
Subject: Fwd: Re: questions on theatre track

please put with theatre request for Curriculum Committee.

>>> Christopher Niess 10/7/2009 6:31 PM >>>
Pat,

First, the graduate students we are supporting in the three programs that will remain on hiatus (MFA-Musical Theatre, MFA-Theatre for Young Audiences and MFA-Design) will have either graduated or working on thesis/internship. This opens up money in the budget to accept a new graduate class in the MFA-Acting track. Accepting a new MFA-Acting class every other year is sustainable with our current budget. As the financial situation improves, we will be investigating other programs on hiatus.

Secondly, because of the reduced number of graduate students, course loads are available so that the MFA Acting classes can be covered (currently graduate faculty are 'crossing over' to cover MFA-Theatre for Young Audience classes).

Please let me know if you need further information...

Christopher

Christopher Niess
Chair/Artistic Director
Associate Professor - Acting Faculty
Stage Movement Specialist
University of Central Florida Conservatory Theatre
P.O. Box 162372
Orlando, FL 32816-2372
407.823.0876
FAX: 407.823.6446
website: CNiess.com

"I can learn more about a man in an hour of play than in a year of conversation" - Plato

2009/2010 40th anniversary season:

DOUBT (http://theatre.cah.ucf.edu/season.php#doubt)...Black Box - September 24-26, October 7, 9, 11
PROOF (http://theatre.cah.ucf.edu/season.php#proof)...Black Box - October 1-4, 8, 10
THE PIRATES OF PENZANCE (http://theatre.cah.ucf.edu/season.php#pirates)...Main Stage - October 22-25, 29-31, November 1
THE LEARNED LADIES (http://theatre.cah.ucf.edu/season.php#ladies)...Black Box - November 19-22, December 2-6
FROM SUN TO SUN (http://theatre.cah.ucf.edu/season.php#sun)...Main Stage - January 21-24, 28-31
ANTIGONE: THE BURIAL AT THEBES (http://theatre.cah.ucf.edu/season.php#antigone)...Black Box - February 18-21, 25-28
A cutting-edge MUSICAL (http://theatre.cah.ucf.edu/season.php#tba)...Main Stage - April 1-4, 7-11

>>> On 10/7/2009 at 12:05 PM, in message <4ACC8400.3B45.0059.0@mail.ucf.edu>, Patricia Bishop wrote:
Chris- Could you tell me what the changes where that are allowing you to reactivate the Acting track compared to last year when you suspended it? I would like to go ahead and put your item on the agenda, but the write up was a little vague. Surely the budget is no better, so what did you have to do to make it feasible and I am sure the committee will want to know if it is sustainable. Let me know.

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

College/Unit(s) Submitting Proposal: Health and Public Affairs **Proposed Effective Term/Year:** summer 2010

Unit(s) Housing Program: Public Administration **Name of Program:** Nonprofit Management

Brief Statement of Program Change: (for suspensions or deletions of degree programs, tracks or certificates, please attach on a separate sheet the rationale for this action, including statement of how this action impacts faculty teaching in and students enrolled in the program, track or certificate. Please note the units that have been consulted if duplication of programs or conflict of interest with other units has occurred.)

Please check one: this action affects a: ☑ Program ☐ Track ☐ Certificate

Please check one: this action is a(n): ☐ Addition ☐ Suspension ☐ Deletion ☑ Revision

RECOMMENDATIONS

☑ Yes ☐ No
Department Chair: Mary Ann Feldheim **Date:** 9-14-09

☑ Yes ☐ No
College Curriculum Committee Chair: Jonetta G. Quinn for Ronnie Korosec **Date:** 10/2/09

☑ Yes ☐ No
College Dean or Unit Head: Melvin Rogers **Date:** 10/2/09

☐ Yes ☐ No
Chair, UPCC or GSC: **Date:**

☐ Yes ☐ No
Dean, Undergraduate Studies or Graduate Studies: **Date:**

Approval:

Provost: **Date:**

This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs.

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______ Department(s) ______ College ______ Registrar ______ Associate Registrar

______ Institutional Research ______ Academic Services ______ Faculty Senate ______ Information, Analysis & Assessment

University of Central Florida

MEMORANDUM

To: UCF Curriculum Committee

Via: COHPA Graduate Council

From: Dr. Mary Ann Feldheim, Department Chair, MNM Program Coordinator

Subject: Increase in credit hours for the MNM program

Date: September 14, 2009

The Department of Public Administration is proposing the addition of one Public Administration elective for three (3) credit hours to the Master of Nonprofit Management (MNM) program. Currently, the program requires 33 credit hours. This change, if approved, would bring the total number of credit hours to 36. The additional elective credit hours must be selected from courses offered by Public Administration (PAD).

Raising the credit hours from 33 to 36 brings the MNM program in-line with the standards for Master of Nonprofit Management programs developed by the National Association of Schools of Public Affairs and Administration (NASPAA), the accrediting agency for our MPA program. NASPAA recommends a minimum of 36 hours in nonprofit management programs.

Prior research shows that most Masters of Nonprofit programs nationwide have a base of thirty-six (36) credit hours. In addition, at UCF most masters-level programs are at least 36 credits. Raising the credit hours to 36 brings the program in-line with our programs peers.

Each MNM student will be able to select a PAD elective in his/her area of interest thus augmenting the student's education as well as enhancing the overall quality of the completed program. The requested change does not need student tracking and there is no affect on other units.

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs.

College/Unit(s) Submitting Proposal: College of Health and Public Affairs Proposed Effective Term/Year: Summer 2010

Unit(s) Housing Program: Department of Public Administration

Name of Program and/or track: Master of Public Administration/Master of Nonprofit Management Joint Degree

Brief Statement of Program Change: (for suspensions or deletions of degree programs, tracks or certificates, please attach on a separate sheet the rationale for this action, including statement of how this action impacts faculty teaching in and students enrolled in the program, track or certificate. Please note the units that have been consulted if duplication of programs or conflict of interest with other units has occurred.)

Please check one: this action affects a: ■ Program ☐ Track ☐ Certificate

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2. **Are you changing the name of an existing program or track?** ☐ Yes ■ No
   If yes, provide the new name of the program or track: _____
   Provide the name of the current program or track: _____
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3. **Are you requesting a CIP Code change?** ☐ Yes ■ No
   If yes, old CIP _____ new CIP _____
4. **A "marked up" catalog copy MUST be included showing the changes for the existing description.**

For program, track, and certificate inactivation or deletions:

1. **Are students currently enrolled in the program?** ☐ Yes ☐ No
2. **If yes, attach a "teach out" plan for all current students specifying how they can finish the program or where students will be placed if being moved to another program. The " teach out" plan should specify when courses will be offered to enable students to finish.**

RECOMMENDATIONS

☑ Yes ☐ No
Department Chair: Mary Jane Fedeli Date: 9-30-09

☑ Yes ☐ No
College Curriculum Committee Chair: Ronetta H. Guinn for Rommie Kornegay Date: 10/2/09

☑ Yes ☐ No
College Dean or Unit Head: Melvin Rozen Date: 10/2/09

☐ Yes ☐ No
Chair, UPCC or GSC: _____ Date: _____

☐ Yes ☐ No
Dean, Undergraduate Studies or Graduate Studies: _____ Date: _____

Approval:

Provost: _____ Date: _____

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

☐ Department(s)	☐ Associate Registrar	☐ Faculty Senate
☐ College	☐ Institutional Research	☐ Information, Analysis & Assessment
☐ Registrar	☐ Academic Services	

University of Central Florida
Department of Public Administration

Summary Statement

This proposal is being put forth by the Department of Public Administration for the development of a new joint degree program that would combine the two masters programs within our department – the Master of Public Administration and the Master of Nonprofit Management. The total student credit hours (SCHs) for the joint degree would be sixty-six (66) hours, exceeding the minimum of thirty (30) hours per degree. There would be twelve (12) student credit hours counted in both programs (cross-crediting) reducing the overall total from 78 SCHs to 66 SCHs. The admission requirements for both programs are the same, making the administration of the program through the Department of Public Administration a natural extension of current practices and duties.

Proposal for Development of a Joint Degree Program
Master of Public Administration / Master of Nonprofit Management (MPA/MNM)

Purpose:
In the United States the "public sector" and the "the nonprofit sector" are closely aligned. Historically students in public administration have studied nonprofit management and after graduation have worked closely with the nonprofit sector or have worked in the nonprofit sector. Conversely students studying nonprofit management find that they must work closely with the public sector to accomplish the missions of their organizations. In response to an identified student demand, we are proposing a joint degree program between the Master of Public Administration (MPA) and the Master of Nonprofit Management (MNM).

The purpose of the joint degree program provides students the opportunity to earn graduate degrees from two academic programs concurrently. In addition to academic program requirements, joint degree programs provide the ability to count a specified number of courses twice *(cross-credit)*. This enables students who are admitted and enrolled in two programs concurrently to, in effect, "save" on the number of total hours required versus those required when completing the two degree programs separately.

The purpose of this joint degree program proposal combining the Master of Public Administration and the Master of Nonprofit Management provides academically talented students an opportunity to earn these two graduate degrees concurrently. This proposal requires the student to complete the core courses for both programs, which are thirty (30) hours for the MPA program and twenty-seven (27) hours for the MNM program. The department proposes that cross-credit be given for twelve (12) credit hours in the elective area, which allows the student to "save" on the total number of hours required for both degrees.

Application Procedure:
Applicants apply directly to the MPA/MNM Joint Degree program.

Students admitted to the MNM or MPA programs who later determine that they wish to complete both the MPA and MNM degrees, may apply and be accepted to the Joint Degree program in a subsequent semester. Students who begin either the MPA or the MNM program and are later accepted to the MPA/MNM Joint Degree program may apply all completed courses toward the Joint Degree program. Courses required for the Joint Degree that were previously completed as part of the MNM or MPA program will not be counted as transfer courses.

Students initially admitted to the MPA/MNM Joint Degree program who subsequently decide they only want to receive one degree, may apply to either the MPA or MNM program separately. If admitted, all applicable courses completed as part of the Joint Degree program may be applied to the single degree program without being counted as transfer courses.

Students successfully completing the joint degree will receive two diplomas, one for the MPA degree and one for the MNM degree.

Admission Requirements:
Applicants must provide undergraduate transcripts showing a conferred bachelor's degree with a GPA equivalency of 3.0 on a 4.0 scale.

Other required supporting documents are:

- Current resume (must be uploaded to the application)
- Statement of interest (must be uploaded to the application), and
- Three letters of recommendation.

Program of Study:
The current MPA program requires 42 credit hours for graduation (30 hours core course and 12 hours electives). The MNM program requires 36 credit hours for graduation (27 hours core courses and 9 hours electives). If taken separately the total credit hours for graduation from both programs would be 78 credit hours. This proposed joint degree program requires the student to complete the core courses for both programs, which are thirty (30) hours for the MPA program and twenty-seven (27) hours for the MNM program. Of these fifty-seven (57) core credit hours cross-credit will be given for six (6) credit hours reflecting the joint requirement of PAD 6335 Strategic Planning and PAD 6417 Human Resource Management. In addition, students will be required to complete fifteen (15) hours in the elective area for a total of sixty-six credit hours to complete the joint degree program. This reduced the total number of credit hours by twelve (12) from seventy-eight (78) to sixty-six (66) credit hours for graduation. A table listing the current program requirements and the proposed joint degree program requirements is attached. (Figure 1)

Program Requirements:
Students must maintain a GPA of 3.0 and earn a grade of "B" or better for all core and capstone courses. Students may earn less than a "B" grade in the elective courses as long as the GPA remains at 3.0; however, earning two or more grades "C" grades or earning any grade lower than "C" is grounds for placing the student on probation. Falling below a GPA of 2.0 at any time while in this program is grounds for dismissal.

Approval:
The program must meet: the approval of the departments involved (Department of Public Administration); the approval of the Graduate Council of the College of Health and Public Affairs; the approval of the Curriculum Committee of the College of Graduate Studies; the approval of the Dean of the College of Graduate Studies, and the approval of the Provost.

Modifications:
Any modifications to the Joint MPA/MNM degree program must follow the same process as the initial program approval.

JOINT DEGREE CURRICULUM: Master of Public Administration / Master of Nonprofit Management

Master of Public Admin	Master of Nonprofit Mgmt	MPA-MNM Dual Degree
6053 – Pub Admin in Governance	5145 – Volunteerism in NP Mgmt	6053 – Pub Admin in Governance
6035 – Pub Admin in Policy	5146 – NP Resource Development	6035 – Pub Admin in Policy
6700 – Analytical Techniques I	5850 – Grant & Contract Management	6700 – Analytical Techniques I
6701 - Analytical Techniques II	6142 – Nonprofit Organizations	6701 - Analytical Techniques II
6037 – Public Organization Mgmt.	6149 – Nonprofit Administration	6037 – Public Organization Mgmt.
6207 – Public Financial Management	6327 – Public Program Evaluation	6207 – Public Financial Management
6227 – Public Budgeting	6208 – NP Financial Management	6227 – Public Budgeting
6417 – Human Resource Management	6417 – Human Resource Management	6417 – Human Resource Management
6335 – Strategic Planning	6335 – Strategic Planning	6335 – Strategic Planning
6062 – Advanced Issues (Capstone)		6062 – Advanced Issues (Capstone)
		5145 – Volunteerism in NP Mgmt
Elective	Elective	5146 – NP Resource Development
Elective	Elective	5850 – Grant &Contract Management
Elective	Elective	6142 – Nonprofit Organizations
Elective		6149 – Nonprofit Administration
		6327 – Public Program Evaluation
		6208 – NP Financial Management
		Elective
		Elective
		Elective
		Elective
		Elective
Total for MPA = 42 Credit Hours	Total for MNM = 36 Credit Hours	Total for Dual = 66 Credit Hours (Reduction of 12 credit hours)

UNIVERSITY OF CENTRAL FLORIDA
LAURENCE VON KALM
ASSOCIATE CHAIR
DEPARTMENT OF BIOLOGY

ORLANDO, FLORIDA 32816-2368 (407)823-6684 FAX (407)823 5769
EMAIL lvonkalm@mail.ucf.edu

TO: COS Undergraduate and Graduate Curriculum Committees

SUBJECT: Course addition and revision

DATE: 8/12509

Dear Committee Members,

We are proposing the following changes to PCB5935, Current Research in Population Genetics and Evolution.

1. We wish to rename the course Population Genetics.
2. We wish to create a split level 4000/5000 level course with both courses using the new name, Population Genetics.

Attached are
- syllabus for graduate students
- syllabus undergraduate students
- statement of how assessment and requirements for graduate and undergraduate students differ
- course action request for name change
- course action request for addition of 4000 level component of course

Sincerely,

Introduction to Population Genetics (PCB 5935 and PCB 4XXX) - Differences between Graduate level and Undergraduate level

The primary difference between the expectations for graduate students and undergraduate students can be summarized in two general areas (1) amount of work, and (2) level of understanding. Graduate students should accomplish both a greater amount of work and a greater degree of understanding than would be expected from undergraduates. As a means to assess understanding, all students (undergraduates and graduate students) will be graded based on two mid-term exams, one final exam, computer lab. exercises, and weekly discussions from the primary literature. For all three exams, graduate students will have a take-home portion of the exam that will not be given to undergraduates. The take-home part of the exams will have the students synthesize the course material in order to design experiments or summarize larger course themes. With regard to literature discussions, graduate students will lead the discussions. Also, graduate students will be required to turn in brief summaries of each paper along with questions they have concerning the paper. Graduate students grades will be based on their paper synopses, how they lead during their chosen week as well as their ability to participate in the other discussions over the course of the term. Undergraduates will be graded on their ability to participate in the discussions. Points earned from discussions as well as all three exams will have different values for graduate students than for undergraduates. In this way, the differences in course expectations are reflected in the course grading system.

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: Sciences **Department:** Biology

Department Chair: Dr. Ross Hinkle **Phone:** 407-823-1333

Academic Affairs Approved Instructor: Dr. Eric Hoffman

	Course Prefix	Number	Title	Credit Hours Ex.: 3(3,0)
Course Prefix	PCB	5935	Current Research in Population Genetics and Evolution	3(3,0)
New or Proposed Revision			Population Genetics	

17 Char. Abbreviation: Pop. Genetics

30 Char. Abbreviation: Population Genetics

Course Description (25 word limit) (If course revision, underscore changes.):

Population genetics and the study of the various forces that result in evolutionary changes through time.

Will lab fees be charged? ☐ Yes ☑ No **Repeat for credit?** ☐ Yes ☑ No How many times?

If course is repeatable, explain what will remain the same and what will change when the course is repeated.

If course is repeatable, who approves content before a course is repeated?

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): Admission to the MS Biology, Ph.D. in Conservation Biology, or Certificate in Conservation Biology, or C.I. **Graded S/U?** ☐ Yes ☑ No

Term of Offering
When will course be offered?

☐ Odd Fall ☐ Odd Spring ☐ Odd Summer

☐ Even Fall ☑ Even Spring ☐ Even Summer ☐ Occasional

Justification for Course Addition or Course Revision

What is the rationale for adding/changing this course? The course is taught as an introduction to population genetics, including historical developments, with additional emphasis on current research. The simplified title is a more accurate reflection of course content.

What majors require or recommend this course for graduation? Biology

If not a major requirement, what will be the source of students?

What is the estimated annual enrollment? 30

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

This course has been taught by the department of Biology for several years.We are not aware of overlaps with other departments/colleges.

University of Central Florida

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**

College Academic Standards **Date**

College Dean **Date**

Graduate Council **Date**

Academic Affairs **Date**

PCB 5935-0001
Population Genetics
Spring Semester, 2010

This course will serve as an introduction into the field of population genetics. Of primary importance is an understanding Mendel's laws and other genetic principals as they affect entire populations of organisms. This course will also include the study of the various forces that result in evolutionary changes through time. Moreover, this class will focus on how to estimate population parameters that are important descriptors of genetic variation. These concepts will necessarily be based on genetic models and require a quantitative approach to genetics. Overall, the aim of this class is to enable you to apply insights gained from classic and modern genetic techniques to understand how genetic variation is produced, maintained, and distributed within and among populations.

Time and Place: Lecture: 11:30 – 12:45pm on Tuesday and Thursday in BL 212. *Please do not be late or leave early, this disrupts the class.*

Credit: 3 semester hours.

Contact: 1.5 hours per week of lecture; 1 hour per week of discussion.

Instructor:
Dr. Eric A. Hoffman
Department of Biology
Office BL 439, Phone 407-823-4007
E-mail: eahoffma@mail.ucf.edu

Office Hours: Wednesday and Thursday from 2:00 – 4:00 pm. Unless there are extenuating circumstances, I will be able to see you at any time during my office hours. If I am not in my office, then look for me in my lab (Rm. 440). If you cannot make these times, I can arrange to meet you at other times if you make an appointment. It would be ideal if you could schedule an appointment even during office hours to ensure that I can dedicate my time to you. Please do not plan to see me just before class, as I will probably be busy getting prepared.

Obtaining additional reading material: I will utilize WebCT for posting reading assignments from primary literature. Please check the WebCT site for this course at least twice a week.

Prerequisites: Grade C or better in undergraduate genetics and population biology and evolution. An excellent understanding of genetics and evolution are very important. I strongly encourage you to drop this class if you are not well grounded in genetics and evolution. This is a ***graduate level advanced*** course in population genetics.

Text: Hartl, DL and AG Clark. ***Principles of Population Genetics***. Sinauer Associates, Inc., Sunderland, Massachusetts.

Readings: In addition to the text there will be supplemental papers I will make available to you each week. As a graduate level class, it is important that we study the most up-to-date material and this necessitates reading the primary literature. Please have all book chapters and papers read prior to lecture.

Evaluation: Your grade in this class will be derived from several sources:
1) **Exams** – There will be two midterms and final exam in this course. Both exams will comprise both in-class **and take-home components**. **As a graduate course, these exams will expect you to synthesize the course material and apply it to material discussed from the primary literature.**
2) **Lab Exercise** – There will be four computer laboratory exercises whereby you will analyze data presented in class and summarize the results. These labs will take place in the computer lab and will be turned in 1 week following the date assigned.
3) **Discussions** – As mentioned above, you are required to read all papers assigned for discussion. Each week we will discuss the assigned paper in detail. **Two students will be assigned at random (today) to lead each discussion. You are REQUIRED to read and try to understand every paper. As a graduate student, you will turn in a brief summary of each paper along with three questions concerning the paper. Your grade will be based on your paper synopses, how you lead during your chosen week as well as your ability to participate in the other discussions over the course of the term.**

Grading Procedure: The following scale will be used to assign course grades.

93 – 100 = A	77 – 79 = C+
90 – 92 = A-	73 – 76 = C
87 – 89 = B+	70 – 72 = C-
83 – 86 = B	<70 = F
80 – 82 = B-	

Points will be assigned as follows:
Mid-term 1 = **75 points**
Mid-term 2 = **75 points**
Each Lab = 15 (4 labs) = 60 points
Class participation = **50 points**
Final Exam = **75 points**

This is a graduate level course; I expect all of you to put for the effort to achieve at least a B.

Cheating: I will not tolerate ANY cheating or plagiarism of any type and will pursue disciplinary actions to the fullest extent possible. Do not copy anything from the web. Use primary literature and cite it!

PCB 5935, Dr. Hoffman
Spring 2010

Tentative Lecture Outline and Discussion Topics

(I reserve the right to change this schedule)

Week	Date	Subject	Book Chapter
1	1/07/08	Introduction to course	Chapter 1: Background information and history *AND* Appendix A
1	1/09/08	Genetic Variation I	Chapter 2: 2.1 – 2.9
2	1/14/08	Genetic Variation II	Chapter 2: 2.10 – 2.14
2	1/16/08	Hardy-Weinberg Principle	Chapter 3
3	1/21/08	NO CLASS – MLK DAY	
3	1/23/08	Recombination	Chapter 4: 4.1 – 4.2;
4	1/28/08	Linkage and Probability	Chapter 4: 4.3 – 4.5
4	1/30/08	Natural Selection I (part 1)	Chapter 5: 5.1 – 5.3
5	2/04/08	Natural Selection I (part 2)	Chapter 5: 5.4 – 5.10
5	2/06/08	LAB 1	Diversity and HWE
6	2/11/08	Mutation I	Chapter 6: 6.1 – 6.4
6	2/13/08	**EXAM 1**	Chapters 1-5
7	2/18/08	Mutation II	Chapter 6: 6.4 – 6.7
7	2/20/08	Genetic Drift I	Chapter 7: 7.1 – 7.3
8	2/25/08	Genetic Drift II	Chapter 7: 7.4 – 7.6
8	2/27/08	Genetic Drift III	Chapter 7: 7.7 – 7.10
9	3/03/08	LAB 2	Selection, mutation and drift
9	3/05/08	LAB 2	Selection, mutation and drift
10	3/10/08	NO CLASS – SPRING BREAK	
10	3/12/08	NO CLASS – SPRING BREAK	
11	3/17/08	Inbreeding	Chapter 8: 8.1
11	3/19/08	Non-random Mating	Chapter 8: 8.1 – 8.3
12	3/24/08	Inbreeding	Chapter 8: 8.1
12	3/26/08	Pop. Subdivision & Gene Flow I	Chapter 9: 9.1 – 9.5
13	3/31/08	Gene Flow II	Chapter 9: 9.5 – 9.7
13	4/02/08	LAB 3	Gene flow
14	4/07/08	**EXAM 2**	Chapters 6-9
14	4/09/08	LAB 3	Gene flow
15	4/14/08	Other techniques	
15	4/16/08	LAB 4	Other Techniques
16	4/21/08	Quantitative Genetics	Chapter 13
16	4/28/08	**FINAL EXAM**	10:00 – 12:50

Important dates:
– Withdrawal deadline
– Grades available on MyUCF

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: Sciences **Department:** Biology

Department Chair: Dr. Ross Hinkle **Phone:** 407-823-1333

Academic Affairs Approved Instructor: Dr. Eric Hoffman

	Course Prefix	Number	Title	Credit Hours Ex.: 3(3,0)
Course Prefix				
New or Proposed Revision	PCB	4XXX	Population Genetics	3(3,0)

17 Char. Abbreviation: Pop. Genetics

30 Char. Abbreviation: Population Genetics

Course Description (25 word limit) (If course revision, underscore changes.):

Introduction to the field of population genetics and the study of the various forces that result in evolutionary changes through time.

Will lab fees be charged? ☐ Yes ☑ No **Repeat for credit?** ☐ Yes ☑ No How many times?

If course is repeatable, explain what will remain the same and what will change when the course is repeated.

If course is repeatable, who approves content before a course is repeated?

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): **Graded S/U?** ☐ Yes ☑ No

Term of Offering
When will course be offered?

☐ Odd Fall ☐ Odd Spring ☐ Odd Summer

☐ Even Fall ☑ Even Spring ☐ Even Summer ☐ Occasional

Justification for Course Addition or Course Revision

What is the rationale for adding/changing this course? Our department has been unable to meet the demand for senior electives in our major. In addition, some of our graduate classes have low enrollment making it difficult to justify the assig

What majors require or recommend this course for graduation? Biology

If not a major requirement, what will be the source of students?

What is the estimated annual enrollment? 30

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

This course has been taught by the Department of Biology for several years.We are not aware of overlaps with other departments/colleges.

University of Central Florida

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 __________

College Academic Standards ______________________ Date __________

College Dean ______________________ Date __________

Graduate Council ______________________ Date __________

Academic Affairs ______________________ Date __________

PCB 4XXX
Population Genetics
Spring Semester, 2010

This course will serve as an introduction into the field of population genetics. Of primary importance is an understanding Mendel's laws and other genetic principals as they affect entire populations of organisms. This course will also include the study of the various forces that result in evolutionary changes through time. Moreover, this class will focus on how to estimate population parameters that are important descriptors of genetic variation. These concepts will necessarily be based on genetic models and require a quantitative approach to genetics. Overall, the aim of this class is to enable you to apply insights gained from classic and modern genetic techniques to understand how genetic variation is produced, maintained, and distributed within and among populations.

Time and Place: Lecture: 11:30 – 12:45pm on Tuesday and Thursday in BL 212. *Please do not be late or leave early, this disrupts the class.*

Credit: 3 semester hours.

Contact: 1.5 hours per week of lecture; 1 hour per week of discussion.

Instructor:
Dr. Eric A. Hoffman
Department of Biology
Office BL 439, Phone 407-823-4007
E-mail: eahoffma@mail.ucf.edu

Office Hours: Wednesday and Thursday from 2:00 – 4:00 pm. Unless there are extenuating circumstances, I will be able to see you at any time during my office hours. If I am not in my office, then look for me in my lab (Rm. 440). If you cannot make these times, I can arrange to meet you at other times if you make an appointment. It would be ideal if you could schedule an appointment even during office hours to ensure that I can dedicate my time to you. Please do not plan to see me just before class, as I will probably be busy getting prepared.

Obtaining additional reading material: I will utilize WebCT for posting reading assignments from primary literature. Please check the WebCT site for this course at least twice a week.

Prerequisites: Grade C or better in undergraduate genetics and population biology and evolution or consent of instructor. An excellent understanding of genetics and evolution are very important. I strongly encourage you to drop this class if you are not well grounded in genetics and evolution.

Text: Hartl, DL and AG Clark. ***Principles of Population Genetics***. Sinauer Associates, Inc., Sunderland, Massachusetts.

Readings: In addition to the text there will be supplemental papers I will make available to you each week. It is important that we study the most up-to-date material and this necessitates reading the primary literature. Please have all book chapters and papers read prior to lecture.

Evaluation: Your grade in this class will be derived from several sources:
1) Exams – There will be two midterms and a final exam in this course. Exams will be in-class and cover material from the book chapters covered. The final exam will be cumulative.
2) **Lab Exercise** – There will be four computer laboratory exercises whereby you will analyze data presented in class and summarize the results. These labs will take place in the computer lab and will be turned in 1 week following the date assigned.
3) Discussions – As mentioned above, you are **REQUIRED** to read all papers assigned for discussion. Each week we will discuss the assigned paper in detail. Your grade will be based on your ability to participate in the discussions over the course of the term.

Grading Procedure: The following scale will be used to assign course grades.

93 – 100 = A	77 – 79 = C+
90 – 92 = A-	73 – 76 = C
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83 – 86 = B	<70 = F
80 – 82 = B-	

Points will be assigned as follows:
Mid-term 1 = 60 points
Mid-term 2 = 60 points
Lab Exercise = 15 points/lab (4 labs) = 60 points
Class participation = 20 points
Final Exam = 60 points

Cheating: I will not tolerate ANY cheating or plagiarism of any type and will pursue disciplinary actions to the fullest extent possible. Do not copy anything from the web. Use primary literature and cite it!

Tentative Lecture Outline and Discussion Topics

(I reserve the right to change this schedule)

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2/04/08		Natural Selection I (part 2)	Chapter 5: 5.4 – 5.10
2/06/08		LAB 1	Diversity and HWE
2/11/08		Mutation I	Chapter 6: 6.1 – 6.4
2/13/08		**EXAM 1**	Chapters 1-5
2/18/08		Mutation II	Chapter 6: 6.4 – 6.7
2/20/08		Genetic Drift I	Chapter 7: 7.1 – 7.3
2/25/08		Genetic Drift II	Chapter 7: 7.4 – 7.6
2/27/08		Genetic Drift III	Chapter 7: 7.7 – 7.10
3/03/08		LAB 2	Selection, mutation and drift
3/05/08		LAB 2	Selection, mutation and drift
3/10/08		NO CLASS – SPRING BREAK	
3/12/08		NO CLASS – SPRING BREAK	
3/17/08		Inbreeding	Chapter 8: 8.1
3/19/08		Non-random Mating	Chapter 8: 8.1 – 8.3
3/24/08		Inbreeding	Chapter 8: 8.1
3/26/08		Pop. Subdivision & Gene Flow I	Chapter 9: 9.1 – 9.5
3/31/08		Gene Flow II	Chapter 9: 9.5 – 9.7
4/02/08		LAB 3	Gene flow
4/07/08		**EXAM 2**	Chapters 6-9
4/09/08		LAB 3	Gene flow
4/14/08		Other techniques	
4/16/08		LAB 4	Other Techniques
4/21/08		Quantitative Genetics	Chapter 13
4/28/08		**FINAL EXAM**	10:00 – 12:50

Important dates:
– Withdrawal deadline
– Grades available on MyUCF

UNIVERSITY OF CENTRAL FLORIDA
LAURENCE VON KALM
ASSOCIATE CHAIR
DEPARTMENT OF BIOLOGY

ORLANDO, FLORIDA 32816-2368 (407)823-6684 FAX (407)823 5769
EMAIL lvonkalm@mail.ucf.edu

TO: COS Undergraduate and Graduate Curriculum Committees

SUBJECT: Course addition

DATE: 8/25/09

Dear Committee Members,

We are proposing the following change to PCB5332, Invasion Biology. We wish to create a split level 4000/5000 level course to be taken simultaneously by undergraduates and graduate students.

Attached are
- syllabus for graduate students
- syllabus undergraduate students
- statement of how assessment and requirements for graduate and undergraduate students differ
- course action request for addition of 4000 level component of course

Sincerely,

Invasion Biology

Betsy Von Holle

Summary of the differences between the graduate and undergraduate <u>Invasion Biology</u> course: I have outlined the main differences between 4XXX and 5332 below, as well as highlighting the relevant text on the graduate syllabus in bold. The following are the activities that the graduate students will perform that are in addition to and separate from the undergraduate level course.

1. **Discussion leadership by graduate students**
   Weekly discussions of the current literature in Invasion Biology will be led by the graduate students. We will break the class up into small groups of graduate and undergraduate students. The graduate students will lead the undergraduates through the discussion paper. This will allow graduate students to have the opportunity to guide the discussion by the undergraduates and develop leadership and teaching skills. They will have to know the material very well in order to lead these discussions and will provide handouts to the undergraduates as a basis of discussion. This will be a unique opportunity for undergraduates to explore the scientific literature in depth, under the supervision of a faculty member and graduate students.
2. **Final paper and proposal by graduate students**
   The undergraduates will take a written test for their final exam. The graduate students will submit a proposal and a final paper where they will explore in depth a topic relevant to biological invasions. This will give them the opportunity to do research on a topic of interest as well as develop their writing skills.

INVASION BIOLOGY

Spring 2010, BL 415, MW

Course #: BSC 5332, 3 credit hours

Prerequisties: PCB 3044 Principles of Ecology or instructor consent

INSTRUCTOR: Dr. Betsy Von Holle, BIO 401F, vonholle@mail.ucf.edu

Office hours, BIO 401F: Thursdays & Fridays: 8:30-10:30, or by appointment

Mailbox location: BIO 301

Background

Effects of non-native species are a great hazard to global biodiversity, second only to habitat destruction. Currently, the United States spends $120 billion a year in total direct costs for non-indigenous species. Florida is one of the most highly invaded states and devotes significant resources for the control and eradication of invasive nonnative species. We will use the new textbook by (Lockwood et al. 2007), as well as Charles Elton's seminal book on invasive species, in addition to current papers relevant to the topics of discussion.

Course objectives

The course will cover the three stages of invasion: introduction, establishment and spread. Factors that influence these stages will also be covered: transport vectors, propagule pressure, disturbance, and environmental resistance. Current management and prediction practices will be covered as well as impacts on native species and ecosystems, and the evolution of nonnatives and natives in response to invasion. There will be twelve student-led discussions of invasion biology literature.

This course will equip UCF Biology graduate students with the general principles of invasion ecology. The addition of species into ecosystems is fascinating to study from a theoretical standpoint, as it provides insights into basic ecological and evolutionary questions. This is a topic that is a top priority for many natural area managers as well as a conservation concern of national significance.

Required Textbooks

1. Lockwood, J.L., Hoopes, M.F., Marchetti, M.P., 2007. Invasion Ecology. Blackwell, Malden, MA, USA, pp. 304.
2. Elton, C. S. 1958. The Ecology of Invasions by Plants and Animals. Methuen, London.

Edition to be purchased: University of Chicago Press, 2000

Student Evaluation

Two Exams: 50%

Paper proposal: 5%

Final Paper: 25%

Discussion participation*: 10%

Graduates: Discussion preparation and leadership: 10%

Attendance, timely posting of discussion questions and responses and participation when others are leading the discussion will be evaluated

Grading Scale

A+	97.5 - 100%	C+	77.4 - 79.9%
A	92.6 – 97.4%	C	72.6 - 77.3%
A-	90 - 92.5%	C-	70 - 72.5%
B+	87.4 - 89.9%	D+	67.4 - 69.9%
B	82.6 – 87.3%	D	62.6 – 67.3
B-	80 - 82.5%	D-	60 - 62.5%
		F	0 - 59.9%

Lecture Schedule

*Underlined lectures will be graduate student-led discussions of outside reading materials.

Readings for each lecture are in parentheses and abbreviated as follows: LOCK= Lockwood et al. 2007, ELTON= Elton, 1958. All other readings will be distributed electronically one week prior to the class period. Please complete the readings prior to the lecture.

MON, Jan 11th - An introduction to invasion ecology (LOCK: CH 1, ELTON 1)

- ♦ Stages of invasion
- ♦ When does a species become 'invasive'?

(Students choose discussion* or timeline topics)

WED, Jan 13th - Transport vectors and pathways (LOCK: CH 2, ELTON 5)

- ♦ Intentional
- ♦ Unintentional

MON, Jan 18th - *Martin Luther King Jr's Birthday – NO CLASS*

WED, Jan 20th - Propagule pressure: Discussion (LOCK: CH 3, 4)

- ♦ Trends in numbers of invaders

MON, Jan 25th - The geography of invasions (ELTON 2, 3, 4)

- ♦ Island-mainland invasions
- ♦ Old World-New World invasions
- ♦ Tropical and boreal invasions

WED, Jan 27rd Successess and Failures **(Proposal for final paper due)**

- ♦ The tens rule
- ♦ Characteristics of successful nonnative species

MON, Feb 1st - Successess and failures: Discussion

WED, Feb 3rd - Modeling the geographic spread of invasive species (LOCK: CH 7)

- ♦ Diffusion models
- ♦ Jumps

MON, Feb 8th - Ecological processes and the spread of non-native species: Discussion (LOCK: CH 8)

- ♦ Time lags
- ♦ Invasion collapse

WED, Feb 10th - Habitat susceptibility to invasion: Disturbance (LOCK: CH 5)

- ♦ Disturbances caused by nonnative species
- ♦ Links between disturbance and invasion

MON, Feb 15th - Disturbance: Discussion

WED, Feb 17th - Habitat susceptibility to invasion: Biotic interactions (LOCK: CH 6; ELTON 6)

- ♦ Influence on establishment success
- ♦ Influence on spread

Lecture Schedule, Continued

MON, Feb 22nd - **Exam 1**

WED, Feb 24th - Biotic Interactions: Discussion

MON, Mar 1st - Evolution (LOCK:CH 11)

- ♦ Character displacement and release
- ♦ Hybridization and introgression

WED, Mar 3rd - Evolution: Discussion

March 8-13 SPRING BREAK

MON, March 15th - Ecological impacts of invasive species: Genetic (LOCK: CH 9)

WED, March 17th - Ecological impacts of invasive species: Population & community (LOCK: CH 10)

MON, March 22nd - Population & community impacts: Discussion

WED, March 24th – Ecological impacts of invasive species: Ecosystem

MON, March 29th - Ecosystem impacts: Discussion

WED, March 31st -Opposition to managing invasions (NYT article)

- Economic
- Aesthetic
- PETA, etc.
- Ideological

MON, April 5th - Prevention and Management of invasions (LOCK: CH 12, ELTON 7)

- Prediction and risk assessment of species invasions
- Management and eradication of nonnative species
- Biocontrol

WED, April 7th - Management of invasions: Discussion

MON, April 12th - US and Foreign Policy concerning Nonnative Species Importation (Simberloff et al. 2005, Lodge et al. 2006)

WED, April 14th - The effects of global change on invasive species: Discussion

MON, April 19th - **Exam 2**

WED, April 21st - Economic impacts of invasive species: Discussion

MON, April 26th - Restoration and nonnative species: Discussion

WED, April 28th, 4pm - Final Paper due (electronic submission)

Graduate Student-led discussions *

At the end of the first class, depending upon the number of students, each student will provide their preferences and be assigned one or more topics/dates for which they will be responsible for leading the discussion. Two papers have been selected by the instructor for each discussion section (see 'Discussion Papers' handout). Electronic versions of these papers will be posted online on WebCourses.

All students should read the papers as soon as possible and develop two discussion questions based on one or both of the papers, no later than noon on the day before the discussion. These questions should be posted on the discussion section of the course webpage. The discussion leader(s) will collate and review these questions and responses with a goal of prioritizing those that are likely to make good discussion topics and discarding those that are of less interest or which seem to have been

resolved. Once the questions and responses are collated, the discussion leader should email this to the instructor.

The student leader(s) will typically begin with a brief summary of the papers and what they considered were some of the most important points. A 1-page handout of this summary should be provided for each student in the class. All citations should be formatted using the 'Ecology' journal format (see handout). Using the discussion agenda they will then lead the class discussion, using questions from the online discussion which they think is of the highest interest to the class. During the class period the discussion leader(s) will provide the class with any additional references that were not used but which relate to the topic. At the end of the Monday or Wednesday discussion period, the discussion leader(s) and instructor will have a short debriefing about how the discussion progressed.

Because of the participatory nature of this course, students will be expected to attend every class and attendance will be recorded. Predicted absenteeism should be discussed with the instructor no less than two weeks prior to the event. Unexpected absenteeism can result in a reduced evaluation for attendance, unless a satisfactory explanation is provided. UCF defines acceptable absences as major illness, serious family emergencies, special curricular or professional requirements (e.g., attending a scientific meeting), court-imposed legal obligations, military obligations, severe weather conditions, religious holidays, and participation in official university-sponsored activities such as intercollegiate athletics. If you miss an exam for other than an acceptable absence your score will be a zero.

Relevant Books (not required):

The Science of Invasion Biology:

- Biological Invasions. 1996. by M. Williamson (Paperback - Dec 31, 1899)

- Strangers in Paradise: Impact and Management of Nonindigenous Species in Florida. 1997. Eds. D. Simberloff, D.C. Schmitz, and T.C. Brown. Island Press 468 pp.

- Invasive Species in a Changing World. 2000. Eds. Mooney & Hobbs. Island Press. 457 pp.

- Invasive Alien Species: A New Synthesis. 2005. Eds Mooney, Mack, McNeely, Neville, Schei, and Waage. Island Press. 368 pp.

- Biological Invasions: Theory and Practice. 1997. Shigesada & Kawasaki. Oxford University Press. 205 pp.

- Species Invasions: Insights into Ecology, Evolution, and Biogeography. 2005. by Dov F. Sax, John J. Stachowicz, and Steven D. Gaines

- Conceptual Ecology and Invasion Biology: Reciprocal Approaches to Nature 2006. by Marc W. Cadotte, Sean M. McMahon, and Tadashi Fukami

- Biological Invasions: A Global Perspective. 1989. Eds. Drake, Mooney, di Castri, Groves, Kruger, Remanek, and Williamson. John Wiley and Son.

- Ecology of Biological Invasions of North America and Hawaii. 1986. Eds. Mooney & Drake. Springer-Verlag. 321 pp.

Descriptions of Invasive Species and Invaded Ecosystems:

- Nature Out of Place: biological invasions in the global age. 2000. By Jason and Roy Van Driesche. Published by Island Press. 363 pp.

• Out of Eden: An Odyssey of Ecological Invasion. 2005. By Alan Burdick. Published by Farrar, Straus and Giroux. 336 pp.

• A Plague of Rats and Rubbervines: the growing threat of species invasions. 2002. By Yvonne Baskin. Published by Island Press/Shearwater Books. 330 pp.

• Alien Species in North America and Hawaii: impacts on natural ecosystems. 1999. By George Cox. Published by Island Press. 387 pp.

• Alien Invasion: America's battle with non-native animals and plants.
By Robert S. Devine. 1998. National Geographic Society. 280 pp.

• Life Out of Bounds: Bioinvasion in a borderless world. By Chris Bright. Published by W.W. Norton & Co. in the Worldwatch Environmental Alert Series. 288 pp.

• And No Birds Sing: A true ecological thriller set in a tropical paradise. By Mark Jaffe. Published in 1997 by Barricade Books, Inc, NY. 284 pp.

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: Sciences **Department:** Biology

Department Chair: Dr. Ross Hinkle **Phone:** 407-823-1333

Academic Affairs Approved Instructor: Dr. Eric Hoffman

	Course Prefix	Number	Title	Credit Hours Ex.: 3(3,0)
Course Prefix	PCB	5935	Current Research in Population Genetics and Evolution	3(3,0)
New or Proposed Revision			Population Genetics	

17 Char. Abbreviation: Pop. Genetics

30 Char. Abbreviation: Population Genetics

Course Description (25 word limit) (If course revision, underscore changes.):

Population genetics and the study of the various forces that result in evolutionary changes through time.

Will lab fees be charged? ☐ Yes ☑ No **Repeat for credit?** ☐ Yes ☑ No How many times?

If course is repeatable, explain what will remain the same and what will change when the course is repeated.

If course is repeatable, who approves content before a course is repeated?

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): Admission to the MS Biology, Ph.D. in Conservation Biology, or Certificate in Conservation Biology, or C.I. **Graded S/U?** ☐ Yes ☑ No

Term of Offering
When will course be offered?

☐ Odd Fall ☐ Odd Spring ☐ Odd Summer

☐ Even Fall ☑ Even Spring ☐ Even Summer ☐ Occasional

Justification for Course Addition or Course Revision

What is the rationale for adding/changing this course? The course is taught as an introduction to population genetics, including historical developments, with additional emphasis on current research. The simplified title is a more accurate reflection of course content.

What majors require or recommend this course for graduation? Biology

If not a major requirement, what will be the source of students?

What is the estimated annual enrollment? 30

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

This course has been taught by the department of Biology for several years.We are not aware of overlaps with other departments/colleges.

University of Central Florida

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
College Academic Standards	Date
College Dean	Date
Graduate Council	Date
Academic Affairs	Date

INVASION BIOLOGY

Spring 2010, BL 415, MW

Course #: BSC 4XXX, 3 credit hours

Prerequisties: PCB 3044 Principles of Ecology and PCB 4683 Evolutionary Biology, or instructor consent

INSTRUCTOR: Dr. Betsy Von Holle, BIO 401F, vonholle@mail.ucf.edu

Office hours, BIO 401F: Thursdays & Fridays: 8:30-10:30, or by appointment

Mailbox location: BIO 301

Background

Effects of non-native species are a great hazard to global biodiversity, second only to habitat destruction. Currently, the United States spends $120 billion a year in total direct costs for non-indigenous species. Florida is one of the most highly invaded states and devotes significant resources for the control and eradication of invasive nonnative species. We will use the new textbook by (Lockwood et al. 2007), as well as Charles Elton's seminal book on invasive species, in addition to current papers relevant to the topics of discussion.

Course objectives

The course will cover the three stages of invasion: introduction, establishment and spread. Factors that influence these stages will also be covered: transport vectors, propagule pressure, disturbance, and environmental resistance. Current management and prediction practices will be covered as well as impacts on native species and ecosystems, and the evolution of nonnatives and natives in response to invasion. There will be twelve student-led discussions of invasion biology literature.

This course will equip UCF Biology graduate students with the general principles of invasion ecology. The addition of species into ecosystems is fascinating to study from a theoretical standpoint, as it provides insights into basic ecological and evolutionary questions. This is a topic that is a top priority for many natural area managers as well as a conservation concern of national significance.

Required Textbooks

1. Lockwood, J.L., Hoopes, M.F., Marchetti, M.P., 2007. Invasion Ecology. Blackwell, Malden, MA, USA, pp. 304.
2. Elton, C. S. 1958. The Ecology of Invasions by Plants and Animals. Methuen, London.

Edition to be purchased: University of Chicago Press, 2000

Student Evaluation

Two Midterm Exams: 50%

Discussion participation*: 10%

Final Exam: 40%

**Attendance, timely posting of discussion questions and responses and participation when others are leading the discussion will be evaluated (see below 'Participation in Graduate Student led discussions').*

Grading Scale

A+	97.5 - 100%	C+	77.4 - 79.9%
A	92.6 – 97.4%	C	72.6 - 77.3%
A-	90 - 92.5%	C-	70 - 72.5%
B+	87.4 - 89.9%	D+	67.4 - 69.9%
B	82.6 – 87.3%	D	62.6 – 67.3
B-	80 - 82.5%	D-	60 - 62.5%
		F	0 - 59.9%

Lecture Schedule

*Underlined lectures will be graduate student-led discussions of outside reading materials.

Readings for each lecture are in parentheses and abbreviated as follows: LOCK= Lockwood et al. 2007, ELTON= Elton, 1958. Readings need to be completed one week prior to the class period and questions posted the day before the discussion.

MON, Jan 11th - An introduction to invasion ecology (LOCK: CH 1, ELTON 1)
- ♦ Stages of invasion
- ♦ When does a species become 'invasive'?

WED, Jan 13th - Transport vectors and pathways (LOCK: CH 2, ELTON 5)
- ♦ Intentional
- ♦ Unintentional

MON, Jan 18th - *Martin Luther King Jr's Birthday – NO CLASS*
WED, Jan 20th - Propagule pressure: Discussion (LOCK: CH 3, 4)
- ♦ Trends in numbers of invaders

MON, Jan 25th - The geography of invasions (ELTON 2, 3, 4)
- ♦ Island-mainland invasions
- ♦ Old World-New World invasions
- ♦ Tropical and boreal invasions

WED, Jan 27rd Successess and Failures
- ♦ The tens rule
- ♦ Characteristics of successful nonnative species

MON, Feb 1st - Successess and failures: Discussion

WED, Feb 3rd - Modeling the geographic spread of invasive species (LOCK: CH 7)
- ♦ Diffusion models
- ♦ Jumps

MON, Feb 8th - Ecological processes and the spread of non-native species: Discussion (LOCK: CH 8)
- ♦ Time lags
- ♦ Invasion collapse

WED, Feb 10th - Habitat susceptibility to invasion: Disturbance (LOCK: CH 5)
- ♦ Disturbances caused by nonnative species
- ♦ Links between disturbance and invasion

MON, Feb 15th - Disturbance: Discussion

WED, Feb 17th - Habitat susceptibility to invasion: Biotic interactions (LOCK: CH 6; ELTON 6)
- ♦ Influence on establishment success
- ♦ Influence on spread

Lecture Schedule, Continued
MON, Feb 22nd - **Exam 1**

WED, Feb 24th - Biotic Interactions: Discussion

MON, Mar 1st - Evolution (LOCK:CH 11)
- ♦ Character displacement and release
- ♦ Hybridization and introgression

WED, Mar 3rd - Evolution: Discussion

March 8-13 SPRING BREAK

MON, March 15th - Ecological impacts of invasive species: Genetic (LOCK: CH 9)

WED, March 17th - Ecological impacts of invasive species: Population & community (LOCK: CH 10)

MON, March 22nd - Population & community impacts: Discussion

WED, March 24th – Ecological impacts of invasive species: Ecosystem

MON, March 29th - Ecosystem impacts: Discussion

WED, March 31st -Opposition to managing invasions (NYT article)

- Economic
- Aesthetic
- PETA, etc.
- Ideological

MON, April 5th - Prevention and Management of invasions (LOCK: CH 12, ELTON 7)

- Prediction and risk assessment of species invasions
- Management and eradication of nonnative species
- Biocontrol

WED, April 7th - Management of invasions: Discussion

MON, April 12th - US and Foreign Policy concerning Nonnative Species Importation (Simberloff et al. 2005, Lodge et al. 2006)

WED, April 14th - The effects of global change on invasive species: Discussion

MON, April 19th - **Exam 2**

WED, April 21st - Economic impacts of invasive species: Discussion

MON, April 26th - Restoration and nonnative species: Discussion

FINAL EXAM Date TBD: Semi-comprehensive

Participation in Graduate Student-led discussions *

Two papers have been selected by the instructor for each discussion section (see 'Discussion Papers' handout). Electronic versions of these papers will be posted online on WebCourses. All students should read the papers as soon as possible and develop two discussion questions based on one or both of the papers, no later than noon on the day before the discussion. These questions should be posted on the discussion section of the course webpage.

Because of the participatory nature of this course, students will be expected to attend every class and attendance will be recorded. Students will be graded on their level of participation. This includes timely posting of meaningful questions regarding the discussion papers as well as participation in the discussion period. Predicted absenteeism should be discussed with the instructor no less than two weeks prior to the event. Unexpected absenteeism can result in a reduced evaluation for attendance, unless a satisfactory explanation is provided. UCF defines acceptable absences as major illness, serious family emergencies, special curricular or

professional requirements (e.g., attending a scientific meeting), court-imposed legal obligations, military obligations, severe weather conditions, religious holidays, and participation in official university-sponsored activities such as intercollegiate athletics. If you miss an exam for other than an acceptable absence your score will be a zero.

Relevant Books (not required):

The Science of Invasion Biology:

- Biological Invasions. 1996. by M. Williamson (Paperback - Dec 31, 1899)

- Strangers in Paradise: Impact and Management of Nonindigenous Species in Florida. 1997. Eds. D. Simberloff, D.C. Schmitz, and T.C. Brown. Island Press 468 pp.

- Invasive Species in a Changing World. 2000. Eds. Mooney & Hobbs. Island Press. 457 pp.

- Invasive Alien Species: A New Synthesis. 2005. Eds Mooney, Mack, McNeely, Neville, Schei, and Waage. Island Press. 368 pp.

- Biological Invasions: Theory and Practice. 1997. Shigesada & Kawasaki. Oxford University Press. 205 pp.

- Species Invasions: Insights into Ecology, Evolution, and Biogeography. 2005. by Dov F. Sax, John J. Stachowicz, and Steven D. Gaines

- Conceptual Ecology and Invasion Biology: Reciprocal Approaches to Nature 2006. by Marc W. Cadotte, Sean M. McMahon, and Tadashi Fukami

- Biological Invasions: A Global Perspective. 1989. Eds. Drake, Mooney, di Castri, Groves, Kruger, Remanek, and Williamson. John Wiley and Son.

- Ecology of Biological Invasions of North America and Hawaii. 1986. Eds. Mooney & Drake. Springer-Verlag. 321 pp.

Descriptions of Invasive Species and Invaded Ecosystems:

- Nature Out of Place: biological invasions in the global age. 2000. By Jason and Roy Van Driesche. Published by Island Press. 363 pp.

- Out of Eden: An Odyssey of Ecological Invasion. 2005. By Alan Burdick. Published by Farrar, Straus and Giroux. 336 pp.

- A Plague of Rats and Rubbervines: the growing threat of species invasions. 2002. By Yvonne Baskin. Published by Island Press/Shearwater Books. 330 pp.

- Alien Species in North America and Hawaii: impacts on natural ecosystems. 1999. By George Cox. Published by Island Press. 387 pp.

- Alien Invasion: America's battle with non-native animals and plants.
By Robert S. Devine. 1998. National Geographic Society. 280 pp.

- Life Out of Bounds: Bioinvasion in a borderless world. By Chris Bright. Published by W.W. Norton & Co. in the Worldwatch Environmental Alert Series. 288 pp.

- And No Birds Sing: A true ecological thriller set in a tropical paradise. By Mark Jaffe. Published in 1997 by Barricade Books, Inc, NY. 284 pp.

Rhonda Nelson - Re: Optimization course that was tabled over the summer.

Email for EECS course that was withdrawn last semester.

From: Rhonda Nelson
To: Weeks, Arthur
Date: 9/10/2009 3:42 PM
Subject: Re: Optimization course that was tabled over the summer.

Received. Thank you. Once Ron Dutton gets the revised CAR back over to us, we can put it back on the agenda.
Rhonda

>>> Arthur Weeks 9/10/2009 10:43 AM >>>
Here's what the dean sent me. I believe that engineering has resolved the issue with the math department. Ron Dutton is working on the changes CAR. Can we get it back on the agenda?

Thanks
Dr. Art Weeks

-----Original Message-----
From: Ron Dutton [mailto:dutton@eecs.ucf.edu]
Sent: Tuesday, September 08, 2009 11:52 AM
To: Marwan Simaan
Subject: Fwd: Re: Opt of Engineering Systems

I got this today from the Chair of Mathematics today. I don't know your plans for scheduling the course, so I am just passing this along.

Ron.

>Date: Tue, 08 Sep 2009 10:20:27 -0400
>From: "Piotr Mikusinski" <piotrm@mail.ucf.edu>
>To: "Ron Dutton" <dutton@cs.ucf.edu>, "Ram Mohapatra" <ramm@mail.ucf.edu>
>Cc: <Xli@pegasus.cc.ucf.edu>
>Subject: Re: Opt of Engineering Systems
>X-Spam-Status: No, score=0.0 required=6.0 tests=none autolearn=failed
>version=3.2.5
>X-Spam-Checker-Version: SpamAssassin 3.2.5 (2008-06-10) on gondor.cs.ucf.edu
>X-Virus-Scanned: clamav-milter 0.95.2 at longwood
>X-Virus-Status: Clean
>Status:
>
>Ron,
>
>We have looked at your proposal and concluded
>that your course and our course are sufficiently
>different to justify offering both courses. We
>feel that our students would benefit from taking
>your course, but also that your students would
>benefit from taking our course. We suggest that

>Optimization of Engineering Systems (EEL 5xxx)
>and Optimization Theory (MAP 6207) be offered in
>alternate years. Our course is already in the
>schedule for Spring 2010. We would like to ask
>you to encourage engineering students to
>consider taking that course.
>
>Piotr
>
>
>_____
>Dr. Piotr Mikusinski
>Professor/Chair
>Department of Mathematics
>University of Central Florida
>Phone: 407-823-2826
>Fax: 407-823-6253
>piotrm@mail.ucf.edu
>
>>>> Ron Dutton <dutton@cs.ucf.edu> 9/3/2009 2:37 PM >>>
>Ram and Piotr,
> With your input, our Dean, Marwan Simaan, has done some rewriting
>and changed the title of the course he is requesting to have created.
>I have attached what he has given me and am in the process of writing
>the CAR for him. If you guys agree with this, then I'll finish the
>CAR with that notation and file it.
> If it looks okay, I think it would be good if one of you could send
>me a short e-mail acknowledging that you've read it and have no
>problem.
> Of course if you don't, I guess we are back to square one.
>
>Ron

Graduate Council Curriculum Committee
Course Agenda for 10-15-2009

College of Medicine Special Topics

PCB 6938 Sect 01 COM-Molecular & Microbiology 3(3,0)
ST: Structure Bioinformatics: PR: PCB 6596 or equivalent. Focus on tools and resources in RNA and protein structure analyses.*Occasional.*
30 character abbreviation: **ST: Structure Bioinformatics**
AGENDA NOTES: Course Addition also being proposed.

Engineering & Computer Science Special Topics

CEG 5937 Sect 01 ECS-Civil & Environmental 3(3,0)
ST: Seepage in Soils: PR: CEG 4011C. Principles of flow through soils; flow nets, analytical solutions; seepage forces, design of filters and drainage layers; dewatering, drainage in dams, embankments, and pavement systems.*Occasional.*
30 character abbreviation: **ST: Seepage in Soils**
AGENDA NOTES: Course Addition also being proposed.

College of Education Special Topics

ADE 5937 Sect 01 ED-Teaching & Learning Princ 3(3,0)
ST:Planning and Development of Adult Education Programs: PR: Graduate standing or C.I. This is a three credit hour graduate course in Adult Education. The course emphasizes curriculum development and program structuring for adult education administrators and facilitators. May be used in the degree program a maximum of 3 times only when course content is different.*Occasional.*
30 character abbreviation: **ST:Plan & Dev Adult Educ Pgm**

EVT 6938 Sect 01 ED-Teaching & Learning Princ 3(3,0)
ST:Organization and Administration in Adult and Community Education: PR: Graduate standing or C.I. This is a three credit hour graduate course in Adult Education. It addresses the principle and processes essential for effective management and will explore the interpersonal and intrapersonal experiences and processes necessary for leadership. May be used in the degree program a maximum of 3 times only when course content is different.*Occasional.*
30 character abbreviation: **ST:Org & Admin Adult & Commun**

EDH 6938 Sect 01 ED-Ed Research, Tech & Lead 3(3,0)
ST:Retention Strategies in Colleges and Universities: PR: Graduate status. Analyzing educational and political ramifications of college attrition, with focus on variation in retention practices and strategies.*Occasional.*
30 character abbreviation: **ST:Retention Strat Coll & Univ**
AGENDA NOTES: Course Addition also being proposed.

Health & Public Affairs Special Topics

CCJ 5937 Sect 01 HPA-Criminal Justice/Legal St 3(3,0)
ST:Personnel Management in Criminal Justice Organizations: PR: Graduate Standing or C.I. This course provides a general overview of the issues and problems in the management of criminal justice agencies with an emphasis on best practices.*Spring.*
30 character abbreviation: **ST:Personnel Management in CJ**

AGENDA NOTES: Course Addition also being proposed.

College of Arts & Humanities Course Action Additions

MUH 5XXX CAH-Music 3(3,0)
Development of Opera: PR: Graduate standing in Music or C.I. An in-depth examination of Western European opera, from its origins around 1600 until the present day.*Even Spring.*
30 character abbreviation: **Development of Opera**

MUL 5XXX CAH-Music 3(3,0)
Brass Literature and Pedagogy: PR: Graduate Standing in Music or C.I. Significant brass repertoire, study materials and a review of teaching techniques for artistic brass performance.*Even Fall.*
30 character abbreviation: **Brass Literature and Pedagogy**

MUL 5XXX CAH-Music 3(3,0)
String Literature and Pedagogy: PR: Graduate standing in Music or C.I. Study of string literature from the Baroque period to the 20th century, along with prominent pedagogical principles.*Odd Fall.*
30 character abbreviation: **String Literature and Pedagogy**

MUL 5XXX CAH-Music 3(3,0)
Woodwind Literature and Pedagogy: PR: Graduate standing in Music or C.I. Major works written for woodwind instruments, as well as the study of the basic concepts and techniques fundamental to teaching woodwind instruments.*Odd Spring.*
30 character abbreviation: **Woodwind Literature & Pedagogy**

MUT 5XXX CAH-Music 3(3,0)
Counterpoint: PR: Graduate standing in Music or C.I. Principles of counterpoint and the study of contrapuntal styles in Western music from the 16th century to the present day.*Even Spring.*
30 character abbreviation: **Counterpoint**

MUT 5XXX CAH-Music 3(3,0)
Orchestration: PR: Graduate standing in Music or C.I. Study of the various instruments commonly found in orchestras and wind ensembles and how to write for these instruments in combination.*Odd Spring.*
30 character abbreviation: **Orchestration**

MVK 5XXX CAH-Music 2(2,0)
Piano Pedagogy: PR: Graduate standing in Music or C.I. Techniques, methods, and experiences of former and current pedagogues to equip students for current or future piano teaching.*Even Spring.*
30 character abbreviation: **Piano Pedagogy**

MVV 5XXX CAH-Music 2(3,0)
Voice Pedagogy: PR: Graduate standing in Music or C.I. Vocal function, anatomy, and pedagogical methodology with application to the voice teacher and performer.*Odd Spring.*
30 character abbreviation: **Voice Pedagogy**

College of Medicine Course Action Additions

BMS 6XXX COM-All departments in COM 5(5,0)
S-3: Cardiovascular and Pulmonary System: PR: Completion of M-1 Term. The CardioPulmonary Module is an integrated, multidisciplinary, overview of medically-relevant cardiovascular and pulmonary conditions.*Occasional.*

30 character abbreviation: **S 3: Cardio/Pulmonary System__**

BMS 6XXX COM-Medicine 5(5,0)
I-2: Focused Individualized Research Experience (F.I.R.E.): PR: I-1: Individual Research (BMS 6910). This course provides the training and mentorship enabling medical students to successfully complete rigorous, independent, scholarly research projects in fields of individual passion.*Occasional.*
30 character abbreviation: **I-2: Research Module_____**

BMS 6XXX COM-Medicine 8(8,0)
P-2: Practice of Medicine: PR: Completion of M-1 Term. P-2: Practice of Medicine is a year long module which teaches advanced clinical examination techniques and clinical reasoning skills integrated with organ systems modules.*Occasional.*
30 character abbreviation: **P-2: Practice of Medicine**

BMS 6XXX COM-Medicine 5(5,0)
S-2: Endocrine/Reproductive System: PR: Completion of M-1 Term. The S-2 module is an integrated overview of diseases of the endocrine, reproductive, and genital systems. Pathology, pathophysiology, pharmacology, and clinical medicine disciplines are included.*Occasional.*
30 character abbreviation: **S 2: Endo/Reproductive System_**

BMS 6XXX COM-Medicine 5(5,0)
S-3: Cardiovascular and Pulmonary Systems: PR: Completion of M-1 Term. The Cardio/Pulmonary module is an integrated, multidisciplinary, overview of medically-relevant cardiovascular and pulmonary conditions.*Occasional.*
30 character abbreviation: **S-3: Cardio/Pulmonary Systems_**

BMS 6XXX COM-Medicine 5(5,0)
S-4: Gastrointestinal/Hepatic/Renal Systems: PR: Completion of M-1 Term. The module is one of six organ-system based modules scheduled for the M2 and end of M1 years. The module provides overview of diseases of the gastro and renal systems.*Occasional.*
30 character abbreviation: **S 4: Gastro/Hepatic/Renal_____**

BMS 6XXX COM-Medicine 4(4,0)
S-5: Skin and Musculoskeletal System: PR: Completion of M-1 Term. The S-5 module is an integrated overview of diseases and disorders affecting the skin, connective tissues, and musculoskeletal systems.*Occasional.*
30 character abbreviation: **S 5: Skin & Musculoskeletal___**

BMS 6XXX COM-Medicine 6(6,0)
S-6: Neurologic Systems: PR: Completion of M-1 Term. This module integrates foundational principles of basic clinical neuroscience relevant for understanding normal nervous system function and the pathophysiologic basis of nervous system disorders.*Occasional.*
30 character abbreviation: **S-6: Neurologic Systems**

IDS 6XXX COM-Molecular & Microbiology 2(2,0)
Experimental Design & Analysis in Biomedical Sciences: PR: Graduate standing in Biomolecular Sciences Ph.D. or C.I. Problem-based graduate course focused on how to effectively design experiments and analyze data for hypothesis-driven research in biomedical sciences. Graded S/U.*Spring.*
30 character abbreviation: **Exp Design & Analy in Sciences**

PCB 6XXX COM-Molecular & Microbiology 3(3,0)
Structure Bioinformatics: PR: PCB 6596 or equivalent. Focus on tools and resources in RNA and protein structure analyses.*Occasional.*
30 character abbreviation: **Structure Bioinformatics**
AGENDA NOTES: Special Topic also being proposed.

Engineering & Computer Science Course Action Additions

CEG 5XXX ECS-Civil & Environmental 3(3,0)
Seepage in Soils: PR: CEG 4011C. Principles of flow through soils; flow nets, analytical solutions; seepage forces, design of filters and drainage layers; dewatering, drainage in dams, embankments, and pavement systems.*Even Spring.*
30 character abbreviation: **Seepage in Soils**
AGENDA NOTES: Special Topic also being proposed.

ENV 6XXX ECS-Civil & Environmental 3(3,0)
Environmental Informatics and Remote Sensing: PR: Graduate standing. Discussion of how the environmental informatics, including hydroinformatics, can be applied for sustainable decision making with the emphasis on remote sensing, GIS, expert systems, decision support systems, data mining, and environmental management.*Occasional.*
30 character abbreviation: **Envir & Remote Sensing**

NOTE: This course was withdrawn last semester due to possible conflict with Math course. New information has been received.
EEL 6XXX ECS-Electrical & Computer Eng 3(3,0)
Optimization of Engineering Systems: PR: Graduate standing and C.I. An unified treatment of optimization methods often used to solve problems in engineering and applied sciences. Software packages are used when appropriate.*Occasional.*
30 character abbreviation: **Optimiz Engineering Systems**

College of Education Course Action Additions

EDH 6XXX ED-Ed Research, Tech & Lead 3(3,0)
Retention Strategies in Colleges and Universities: PR: Graduate status. Analyzing educational and political ramifications of college attrition, with focus on variation in retention practices and strategies.*Occasional.*
30 character abbreviation: **Retention Strat Coll & Univ**
AGENDA NOTES: Special Topic also being proposed.

Health & Public Affairs Course Action Additions

CCJ 5XXX HPA-Criminal Justice/Legal St 3(3,0)
Personnel Management in Criminal Justice Organizations: PR: Graduate standing or C.I. This course provides a general overview of the issues and problems in the management of criminal justice agencies with an emphasis on best practices.*Spring.*
30 character abbreviation: **Personnel Management in CJ Org**
AGENDA NOTES: Special Topic also being proposed.

College of Medicine Course Action Revisions

BMS 6001 HB-1 Molecules to Cells 5(5,0)
PR: Matriculation in the College of Medicine M.D. Program.

~~Students will be introduced to the biomolecular structure in biochemistry, molecular biology, genetics and the principles of medical informatics, and their application to biomedical science.~~
The HB1 Module is an integrated, multidisciplinary, review of the basic sciences of biochemistry, molecular biology, genetic, nutrition, pharmacology and cell biology underpinning modern medicine.

BMS 6002 HB-2 Structure and Function 11(11,0)
PR: Matriculation in the College of Medicine M.D. program.
An integrated module with a curriculum that includes Clinical Anatomy, Embryology, Microanatomy, Physiology, ~~Neurosciences, and Radiology using~~ and Neurosciences using medical imaging, clinical presentations, lectures, small-group sessions, team-based learning ~~sessions.~~ sessions

BMS 6015 P-1 Practice of Medicine 7(7,0)
PR: Matriculation in the College of Medicine M.D. program.
~~Year-long longitudinal instruction in communication, examination, recording skills including medico-legal, socioeconomic, cultural/ethical, psychosocial and personal issues influencing physician and patient interaction.~~
Extending throughout the first year of medical school, this module includes skills training in medical interviewing and physical examination while also addressing the context of the medical practice.

BMS 6910 ~~I-1 Individual Research~~ 5(5,0)
I-1 Focused Individual Research (F.I.R.E.)
PR: Matriculation in the College of Medicine M.D. program.
This course ~~will provide training, tools,~~ provides the training and mentorship ~~for~~ enabling medical students to successfully ~~conduct a~~ complete rigorous, independent, ~~and scholarly biomedical research project of their choice.~~ scholarly research projects in fields of individual passion.
30 character abbreviation: **I-1 Individual Research_____**

Tabled – requesting details of what has changed in contents of this course.
BSC 6431 Practice of Biomolecular Science ~~2(2,0)~~
3(3,0)
PR: Graduate standing.
Introduces students to the practice of biomolecular science. Graded S/U.

College of Sciences Course Action Revisions

PCB 5935 ~~Current Research in Population Genetics and Evolution~~ 3(3,0) SPLIT CLASS
Population Genetics
~~PR: Genetics and Population Biology or graduate standing in Biology.~~ PR: Admission to the MS Biology, Ph.D. in Conservation Biology, or Certificate in Conservation Biology, or C.I.
~~Fundamentals of population genetics and application to evolutionary theory.~~
Population genetics and the study of the various forces that result in evolutionary changes through time.
30 character abbreviation: **Population Genetics**

College of Education Course Action Revisions

SPS 6191 Individual Psychoeducational Diagnosis I 4(4,0)
PR: Graduate admission and ~~C.I.~~ CI. CR: SPS ~~6206.~~ 6946.
Measurement of ~~intellectual~~ students' achievement and cognitive ~~functioning of children and adults. Administration, scoring~~ functioning. Administration, scoring, and interpretation of ~~Wechsler scales and selected psychometric instruments.~~ contemporary iterations of achievement and processing measures used in school psychology.

SPS 6192 Individual Psychoeducational Diagnosis II 4(4,0)
PR: Graduate admission and C.I. CR: SPS ~~6948.~~ 6946.
Measurement of ~~functioning of children and adults.~~ students' intellectual and cognitive ~~Binet IV, K-ABC, Woodcock-Johnson, and other psychometric instruments.~~ functioning. Administration, scoring, and interpretation of contemporary iterations of IQ measures used in School Psychology.

SPS 6206 Psychoeducational Interventions 3(3,0)
~~PR: SPS 6191.~~ PR: Graduate admission and CI.
~~This course will enable school psychology students to link psychoeducational assessment results to appropriate prescriptive interventions.~~
This course will enable school psychology students to link psychoeducational assessment results to systematic, evidence-based psychoeducational interventions to improve student functioning.