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SEP 21 2010
WSU REGISTRAR

Washington State University
MAJOR CURRICULAR CHANGE FORM - - COURSE
(Submit original signed form and ten copies to the Registrar's Office, zip 1035.)
See https://www.ronet.wsu.edu/ROPubs/Apps/HomePage.ASP *for this form.*

Required Effective Date: 01/10/2011 **(effective date cannot be retroactive)**

☑ New course ☐ Temporary course ☐ Drop service course
☐ There is a course fee associated with this course
http://www.schedules.wsu.edu/Schedules/Apps/CourseFees.ASP

☐ Variable credit _____
☐ Repeat credit (cumulative maximum _____ hours)
☐ Increase credit (former credit _____)
☐ Lecture-lab ratio (former ratio _____)
☐ Number (former number _____)
☐ Prefix (former prefix _____)
☐ Crosslisting (between WSU departments) **(Must have both departmental signatures)**
☐ Cooperative listing (UI prefix and number _____)
taught by: WSU ☐ UI ☐ jointly taught ☐
☑ Conjoint listing (400/500)
☐ S, F grading
☐ Request to meet Writing in the Major [M] requirement **(Must have All-University Writing Committee Approval)**
☐ Request to meet GER in _____ **(Must have GenEd Committee Approval)** ☐ Fulfills GER lab (L) requirement
☐ Professional course **(Pharmacy & Vet Med only)** ☐ Graduate credit **(professional programs only)**
☐ Other (please list request) _____

course prefix	course no.	title
BIOL	476/576	Epigenetics and Systems Biology

credit	lecture hrs per week	lab hrs per week	studio hrs per week	prerequisite
3	3			400 level ~~credit~~ - Biol 301 for ~~BIOL~~ Biol 476

Description (**20 words or less**) Current literature based course on epigenetics & systems biology. Topics include: environmental epigenetics, disease etiology & role of epigenetics in evolutionary biology.

see pg. 3 for syllabus

Instructor: Michael Skinner Phone number: 335-1524 Email: skinner@wsu.edu
Contact: Justine Rupp Phone number: 335-3553 Email: ruppj@wsu.edu

- Please attach rationale for your request, a detailed course outline/syllabus and explain how this impacts other units in Pullman and other branches (if applicable).
- Secure all required signatures and provide 10 copies to the Registrar's Office.

Chair/date: 17 Sept. 2010	Dean/date: 9/17/10	General Education Com/date
Chair (if crosslisted/interdisciplinary)*	Dean (if crosslisted/interdisciplinary) *	Graduate Studies Com/date
All-University Writing Com/date	Academic Affairs Com/date	Senate/date

***If the proposed change impacts or involves collaboration with other units, use the additional signature lines provided for each impacted unit and college.**

WASHINGTON STATE UNIVERSITY

Michael K. Skinner
Center for Reproductive Biology
School of Biological Sciences
Pullman, WA 99164-4236

Center for Reproductive Biology WSU & U of I

Phone: 509-335-1524
Fax: 509-335-2176
Email: skinner@wsu.edu

Memorandum

Date: September 2, 2010

To: Course Review Committees

From: Michael Skinner

Re: Course Request "Epigenetics and Systems Biology"

This course request is for a conjoint 400/500 level undergraduate/graduate course in the School of Biological Sciences. Currently there is no epigenetic course on campus and no systems biology course on campus in any department or program. Due to the importance of epigenetics to toxicology, development, disease etiology and evolutionary biology, a course in this topic and area is required. It is anticipated that many undergraduate and graduate students in various departments will take this as a campus wide course due to its impact on nearly all life science related departments. Since no course exists for undergraduate or graduate students, and the lectures and literature review would be similar, this course is proposed to be a conjoint 400/500 level course. As outlined in the syllabus, the course requirements for the undergraduate and graduate students are distinct, and course credit can not be obtained for both 400 and 500 level listings by an individual student. Due to this void in the course offerings on campus, this course is proposed.

Graduate School Questions Regarding Conjoint Courses

1. List the number of faculty in the degree granting area

The School of Biological Sciences (SBS) has 31 faculty at the main campus and seven faculty at WSU-V.

2. List the number of graduate courses listed on the books for the degree granting area

SBS teaches 38 courses at the 500 level, and four at the 600-800 level.

3. How many courses are currently listed as conjoint in the degree granting area?

The only conjoint course in SBS is Plant Anatomy (Biol 409/509)

4. How often are these conjoint courses taught?

Biol 409/509 is taught alternate years (even)

5. How many of these courses are designed as graduate courses with few undergraduate enrolled?

We are not aware of the original intent for Plant Anatomy, but current enrollment is four students in Biol 409, and 18 students in Biol 509.

6. Over the past three years, what percentage of courses on Graduate degree programs of study in this degree granting area are conjoint courses.

We do not have this exact information, but it is likely very small because only one course is conjoint, and it is not required by the majority of graduate students in SBS.

7. Why is this particular course integral to the graduate degree granting area?

Please see "Justification" for the course

"Epigenetics and Systems Biology"

Spring 2011(Odd Years) - Course Syllabus
SBS 400/500 Level Undergraduate/Graduate Course (3 Credit)
Time - Tuesday and Thursday 10:35 am-11:50 am,
Room - TBA
Course Director - Michael Skinner, Abelson Hall 507, 335-1524

Objective – The objective of the course is to learn the concept and critical role of systems to understand molecular, cell, development, physiology and evolutionary aspects of biology with a focus on the role of epigenetics in systems biology.

Schedule/Lecture Outline -

January	11/13	Week 1	Systems Biology
	18/20	Week 2	Physiology/ Biology/ Evolution Systems
	25/27	Week 3	Genome/ Expression/ Cell Biology Systems
February	1/3	Week 4	Molecular Genetics/ Genome / Transcriptome
	8/10	Week 5	Epigenetics/ History / Molecular
	15/17	Week 6	Epigenetics & Genomics
	22/24	Week 7	Epigenetics & Genetics
March	1/3	Week 8	Environmental Impact on Biology
	8/10	Week 9	Environmental Epigenetics
	14/18	**Week 10**	**Spring Break**
	22/24	Week 11	Cell & Developmental Biology
	29/31	Week 12	Epigenetics of Cell & Developmental Biology
April	5/7	Week 13	Disease Etiology
	12/14	Week 14	Epigenetics & Disease Etiology
	19/21	Week 15	Evolutionary Biology & Genetics
	26/28	Week 16	Epigenetics & Evolutionary Biology
May	3/6	Week 17	Grant Review/ Study Section Meeting

Instruction Format -

- One 1.5 hour overview/lecture per week
- One 1.5 hour literature review/discussion session per week

Course Requirements -

1. Attendance
2. Participation in literature and discussion sessions

Graduate Students:

3. Grant proposal (5 page limit) due week of April
4. Student Grant Review session on week of May 3/6

Undergraduate Students:

3. Two exams

Grading and Evaluation-

- Both in class participation (25%) and (graduate students) the proposal (75%) or (undergraduate students) exams (75%) will be factors considered.

References and Textbook-

- Reading literature and references provided one week prior to session
- No required textbook

Graduate Students

Grant Proposal

Outline:

- Title
- Abstract
- Specific Aims
- Background
- Preliminary Results
- Experimental Design and Methods
- References

(5-10 pp. single spaced typed limit)

Key Points:

- Specific aims should be focused and concise and clarify hypothesis
- Be as concise and direct as possible
- Work significance of proposal into grant when appropriate
- Use only critical preliminary results

Additional Information:

- Propose short-range studies to address long-range goals
- Write grant for 3 to 4 year period to complete studies
- Feasibility of success is critical, ask right type of question
- Experimental design needs to address hypothesis

Score/Rating:

Factors involved: Type question addressed, organization of thoughts, preliminary results, feasibility, reasonable completion expectations, focus of aims and proposed studies.

Score		
1.0 - 1.5	**Outstanding**	Funded
1.5 - 2.0	**Excellent**	Probably Funded
2.0 - 2.5	**Good**	Accepted, but not Funded
2.5 - 3.0	**Satisfactory**	
3.0 - 3.5	**Adequate**	
3.5 - 4.0	**Fair**	
4.0 - 5.0	**Acceptable**	

Review:

NIH Study Section style review with all students/fellows participating in the review. Primary and secondary reviewers will be selected and all grants will be critiqued.

Note:

Welcome to use opportunity to prepare grants for student orals or fellowship applications.

Conjoint Course Requirements –

1) Undergraduate –
    1) Attendance
    2) Participation in literature and discussion session
    3) 2 exams (Midterm and Final)

2) Graduate –
    1) Attendance
    2) Participation and presentation in literature and discussion session
    3) Grant proposal (5 page limit)
    4) Grant review session participation

3) Same lecture and literature discussion session for both 400 and 500 level students.

4) Students may receive credit in only one component of the conjoint listed course.

Proposed Catalog Entry –

SBS 400 level Epigenetics and Systems Biology 3 (Spring odd Years). Pre req Biol 301. Current literature based course on epigenetics and systems biology with topics in environmental epigenetics, disease etiology, and role epigenetics in evolutionary biology. Credit not granted for both 400 and 500.

SBS 500 level Epigenetics and Systems Biology 3 (Spring odd Years) Current literature based course on epigenetics and systems biology with topics in environmental epigenetics, disease etiology, and role epigenetics in evolutionary biology. Credit not granted for both 400 and 500.

Students with Disabilities

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Plagiarism and Cheating

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REVISED

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"Epigenetics and Systems Biology"

Spring 2011(Odd Years) - Course Syllabus
Biol 476/576 Undergraduate/Graduate Course (3 Credit)
Time - Tuesday and Thursday 10:35 am-11:50 am,
Room - TBA
Course Director - Michael Skinner, Abelson Hall 507, 335-1524

Objective – The objective of the course is to learn the concept and critical role of systems to understand molecular, cell, development, physiology and evolutionary aspects of biology with a focus on the role of epigenetics in systems biology.

Schedule/Lecture Outline -

January	11/13	Week 1	Systems Biology
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May	3/6	Week 17	Grant Review/ Study Section Meeting

Instruction Format -

- One 1.5 hour overview/lecture per week
- One 1.5 hour literature review/discussion session per week

Course Requirements -

1. Attendance
2. Participation in literature and discussion sessions

Graduate Students:

3. Grant proposal (5 page limit) due week of April
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Undergraduate Students:

3. Two exams

Grading and Evaluation-

- Both in class attendance and participation (25%) and (graduate students) the proposal (75%) or (undergraduate students) exams (75%) will be factors considered.
- Grade scale A(90%), B(80%), C(70%), F(<60%), adjusted to follow class performance

References and Textbook-

- Reading literature and references provided one week prior to session

- No required textbook (suggested reading provided from selected textbooks such as The Cell or Genes and review articles)

Graduate Students

Grant Proposal

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    1) Attendance
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    3) 2 exams (Midterm and Final)

2) Graduate –
    1) Attendance
    2) Participation and presentation in literature and discussion session
    3) Grant proposal (5 page limit)
    4) Grant review session participation

3) Same lecture for both 476 and 576 level students.

4) Same discussion session for both 476 and 576 level students, with the 576 students orally presenting specific literature (provided by instructor) overviews and leading discussion on that literature with questions provided by instructor to facilitate, with the 476 students participating in discussion and provided selected questions regarding the literature to answer during class and hand back after class for P/F review of answers.

5) Students may receive credit in only one component of the conjoint listed course.

Proposed Catalog Entry –

SBS 476 level Epigenetics and Systems Biology 3 (Spring odd Years). Pre req Biol 301. Current literature based course on epigenetics and systems biology with topics in environmental epigenetics, disease etiology, and role epigenetics in evolutionary biology. Credit not granted for both 476 and 576.

SBS 576 level Epigenetics and Systems Biology 3 (Spring odd Years) Current literature based course on epigenetics and systems biology with topics in environmental epigenetics, disease etiology, and role epigenetics in evolutionary biology. Credit not granted for both 476 and 576.

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A Commitment to Campus Safety

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http://safetyplan.wsu.edu http://alert.wsu.edu http://oem.wsu.edu/emergencies

REVISED 10/28/10 # 060

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