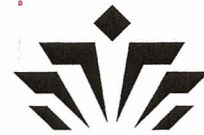


2013-2014 LONG SIGNATURE SHEET

RECEIVED  
12/02/13



Proposal Number: BIOL11-22-13c

UNC CHARLOTTE  
Reinstate BIOL 5167 Medical Genetics to the Biology graduate program

Proposal Title: Reinstate BIOL 5167 Medical Genetics to the Biology graduate program

Originating Department: BIOLOGY

Revised  
RECEIVED  
1-23-14

TYPE OF PROPOSAL: UNDERGRADUATE \_\_\_\_\_ GRADUATE \_\_\_\_\_ UNDERGRADUATE & GRADUATE\_X\_ (Separate proposals sent to UCCC and Grad. Council)

DATE RECEIVED	DATE CONSIDERED	DATE FORWARDED	ACTION	SIGNATURES
			Approved	DEPARTMENT CHAIR [print name here:] <u>Dr. Martin G. Kletz</u>
			Approved	COLLEGE CURRICULUM COMMITTEE CHAIR [print name here:] <u>Robert Lemmen</u>
			Approved	COLLEGE FACULTY CHAIR (if applicable) [print name here:] <u>STEVEN SABOR</u>
	2/5/14		Approved	COLLEGE DEAN [print name here:] <u>C. BR00Y</u>
			Approved	GENERAL EDUCATION (if applicable; for General Education courses) [print name here:]
			Approved	UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR (for undergraduate courses only)
2-28-14	3-11-14	4-28-14	Approved	GRADUATE COUNCIL CHAIR (for graduate courses only) <u>ALAN R. FREITAG</u>
				FACULTY GOVERNANCE ASSISTANT (Faculty Council approval on Consent Calendar)
				FACULTY EXECUTIVE COMMITTEE (if decision is appealed)



# UNC CHARLOTTE

## LONG FORM COURSE AND CURRICULUM PROPOSAL

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\*To: Undergraduate Course and Curriculum Committee and the Graduate Council.

From: Dept of Biology, CLAS, UNC Charlotte

Date: November 22, 2103

Re: Reinstate Course BIOL5167

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The Long Form is used for major curriculum changes. Examples of major changes can include: creation of a new major, creation of a new minor, creation of a new area of concentration, or significant changes (more than 50%) to an existing program (Note: changing the name of an academic department does not automatically change the name(s) of the degree(s). The requests must be approved separately by the Board of Governors.)

Submission of this Long Form indicates review and assessment of the proposed curriculum changes at the department and collegiate level either separately or as part of ongoing assessment efforts.

\*Proposals for undergraduate courses should be sent to the Undergraduate Course and Curriculum Committee Chair. Proposals related to both undergraduate and graduate courses, (e.g., courses co-listed at both levels) must be sent to both the Undergraduate Course and Curriculum Committee and the Graduate Council.

University of North Carolina at Charlotte

New: Graduate Degree Program

Proposal from: Department of Biology

Title: Reinstate **BIOL 5167 Medical Genetics** to the Biology graduate program

## **A. Proposal Summary**

### **1. Summary**

Department of Biology proposes to reinstate BIOL 5167 Medical Genetics course to the Biology graduate program and the UNC Charlotte course catalog. This graduate course, currently offered by Dr. Valery Grdzlishvili as a section of "Topics in Biology" [BIOL 5000], had been offered until 2004 by Dr. Ronald Ostrowski as BIOL 5167 Medical Genetics. Unfortunately, while Dr. Grdzlishvili redeveloped this course, it was removed from UNC Charlotte catalog. Thus since that time Dr. Grdzlishvili has taught the course two times in the Spring 2011 and Fall 2012 semesters as a temporary section of "Topics in Biology" [BIOL 5000 - D01]. This course has been well received and has consistently high enrollment among Biology graduate students. The course provides solid connections between basic biologic concepts as well as human physiology concepts taught in lower division courses and human health and disease. The course provides students with real world applications to the basic concepts presented in other courses and provides them with an ability to understand issues discussed in the public sector concerning public health, research and care ethics, and legal issues.

A parallel proposal has been submitted for the companion BIOL 4167 course.

## **B. Justification**

### **1. Identify the need addressed by the proposal and explain how the proposed action meets the need.**

Master's and Ph.D. students in the biological sciences that aspire for careers in medical, dental, veterinary, pharmacology, physiology, and many other health and agricultural related professions require a detailed understanding of the genetics to human health. Currently, we have no such course in our curriculum, and the proposed new course will serve as an introduction to this field. In addition, the course provides connections between basic biologic concepts, human physiology concepts, and human health and disease. The course provides students with real world applications to the basic concepts presented in other courses and provides them with an ability to understand issues discussed in the public sector concerning public health, research and care ethics, and legal issues.

Specifically, this course will provide up-to-date information about various applications of genetics to human health, including studies of the inheritance of diseases in families, mapping of disease genes to specific locations on chromosomes, analyses of the molecular mechanisms through which genes cause disease, diagnosis and treatment of genetic disease, and genetic counseling, in which information regarding risks, prognoses, and treatments is communicated to patients and their families. This course will also cover the social implications of novel genetic technologies, the Human Genome Project, cloning, embryonic stem cell research, and more. During this course, several original papers in the field of "Medical Genetics" will be discussed, so students could learn in depth how contemporary genetic experiments are designed, conducted, interpreted and reported. Presently no such course exists on the UNC Charlotte campus.

Each graduate student will present one original paper in the field of “Medical Genetics”. Graduate students will demonstrate their abilities to deliver professional scientific presentation as well as to show their in-depth understanding of how contemporary genetic experiments are designed, conducted, interpreted and reported.

2. Discuss prerequisites/corequisites for courses including class standing.

Admission in the MS or PhD in Biology programs or permission from the instructor for graduate students from other programs. We would encourage students who have aspirations for careers in medical, dental, veterinary, pharmacology, physiology, and many other health and agricultural related professions to take this course.

3. Demonstrate that course numbering is consistent with the level of academic advancement of students for whom it is intended.

The numbering for BIOL 5167 is consistent with numbering policy and would recapitulate the previous numbering used.

1<sup>st</sup> digit: 5 designates graduate level course work

2<sup>nd</sup> digit: indicates a concentration course

3<sup>rd</sup> digit: consistent with established numbering systems:

- 2 - Plant Biology
- 3 - Animal Biology
- 4 - Ecology and Behavior
- 5 - Microbiology/Immunology/Virology
- 6 - Biotechnology
- 7- Physiology
- 8- Developmental Biology
- 9- Anatomy & Morphology

4<sup>th</sup> digit: at the discretion of the individuals who developed the specific proposals

4. In general, how will this proposal improve the scope, quality and/or efficiency of programs and/or instruction?

Master’s and Ph.D. students in the biological sciences that aspire for careers in medical, dental, veterinary, pharmacology, physiology, and many other health and agricultural related professions require a detailed understanding of the genetics to human health. Currently, we have no such course in our curriculum, and the proposed new course will serve to alleviate this deficiency.

Furthermore, this course would add significant understanding to other graduate level courses which are presently being taught in Biology. For example, Immunology, Neurobiology, Physiology and Virology courses are just a few examples where there would be synergistic learning opportunities. Presently such content is not being presented in depth in these other courses. Stated simply, this new course would be a logical extension that would add substantial content for many existing courses.

5. If course(s) has been offered previously under special topics numbers, give details of experience including number of times taught and enrollment figures.

This course has had been offered until 2004 by Dr. Ronald Ostrowski as BIOL 5167 Medical Genetics. It has been offered since since that time Dr. Grdzlishvili has taught the course as a temporary section of “Topics in Biology” BIOL 5000 - D01. This course was offered two times in the Spring 2011 and Fall 2012 semesters by Dr. Valery Grdzlishvili as a “Topics in Biology” [BIOL 5000] course. In Spring 2011, four MS in Biology and one PhD in Biology graduate students enrolled. In Fall

2012, four MS in Biology graduate students enrolled. The course was well received by the students and very popular as evidenced by positive student evaluations.

## C. Impact

### 1. What group(s) of students will be served by this proposal? Describe how you determined which students will be served.

As noted above, the impact within the Biology department would be positive. Not only would this new course alleviate a deficiency in our course offerings, but would also this course would add significant understanding to other graduate level courses which are presently being taught in Biology. For example, Immunology, Neurobiology, Physiology and Virology courses are just a few examples where there would be synergistic learning opportunities.

Campus-wide, there were no such graduate-level (5000, 6000, or 8000 level) course offerings that could be identified which would conflict with the content of this newly proposed course. Due to the timely subject matter and course content, we would anticipate that graduate students in other disciplines (e.g. Kinesiology, Biotechnology, etc.) would also benefit from such a course.

### 2. What effect will this proposal have on existing courses and curricula?

#### a. *When and how often will the added course be taught?*

Dr. Grdzlishvili anticipates teaching this new course *On Demand* beginning in 2015. This will allow first and second year graduate students in Biology the opportunity to take this course.

#### b. *How will the content and/or frequency of offering of other courses be affected.*

The content and/or frequency of other graduate course offerings in Biology will not be affected since Dr. Grdzlishvili will continue teaching his other courses in addition to the new course and course content in other Biology courses does not overlap with this course.

#### c. *What is the anticipated enrollment in the courses added?*

We anticipate the enrollment to be approximately 5 to 8 Master's and/or Ph.D. students per semester. This represents a portion of the number of new students that enroll in graduate studies in Biology each year and all would be taking the course for credit. As noted above there is also the possibility that graduate students from other programs might participate in this course due to its content and subject matter.

#### d. *How will enrollment in other courses be affected? How did you determine this?*

We do not anticipate a significant effect on the enrollment in other 5000, 6000, or 8000 level graduate courses in Biology. The Department of Biology is currently restructuring its curriculum to define paths of study for our graduate students as well as providing courses which fill needs for their instruction. We anticipate that this new, elective course will fill such a need and serve those students most interested in careers in the health and agricultural-related sciences.

#### e. *If the course has been offered previously under special topics numbers, give details of experience including number of times taught and enrollment figures.*

This course was offered two times in the Spring 2011 and Fall 2012 semesters by Dr. Valery Grdzlishvili as a "Topics in Biology" [BIOL 5000] course. In Spring 2011, four MS in Biology and one

PhD in Biology graduate students enrolled. In Fall 2012, four MS in Biology graduate students enrolled.

f. *Identify other areas of catalog copy that would be affected, e.g., curriculum outlines, requirements for degree, etc.*

As this will be an ongoing course offering, we would reestablish the BIOL5167 course number along with inclusion of a new catalog entry.

## **D. RESOURCES REQUIRED TO SUPPORT PROPOSAL**

### 1. Personnel

#### a. *New faculty*

No new faculty are required.

#### b. *Qualified faculty members interested in teaching the course.*

Instruction will be by existing tenure track faculty. Dr. Valery Grdzlishvili developed and will teach this course *On Demand*. Other faculty that could instruct the course include Dr. Mukherjee, Dr. Clemens, Dr. Richardson, and Dr. Marriott.

### 2. Physical Facility

None required beyond existing classrooms.

### 3. Equipment and Supplies

No additional equipment and supplies are required.

### 4. Computer

No additional computing resources are required beyond MOODLE 2

### 5. Audio

No additional equipment or services will be needed from Media Services. Standard classroom podium is adequate.

### 6. Other Resources

None

### 7. Sources of Funding

No new funding required.

## **E. CONSULTATION WITH THE LIBRARY AND OTHER DEPARTMENTS/UNITS**

### 1. Library Consultation

Attached

## 2. Consultation with Other Departments and Units

Other graduate school departments were not specifically consulted on this addition since there are no courses being taught at the 5000, 6000, or 8000 levels that resemble the content to be presented in this new course.

The Ph.D. in Biology program has an interdisciplinary approach that involves faculty from the departments of Chemistry, Kinesiology, Mechanical Engineering, Public Health Sciences, Anthropology, Physics and Optical Sciences, and the Carolinas Medical Center. We have a Doctoral Advisory Panel composed of faculty representatives from the participating units, which functions to provide input to the Biology Graduate Committee about doctoral program matters. The members of the Advisory Panel (Dr. Jerry Troutman, Chemistry; Dr. Farah Bahrani, CMC; Dr. Eric Wikstrom, Kinesiology; Dr. Gloria Elliott, Mechanical Engineering; Dr. Craig Allan, Geography and Earth Sciences; Dr. Diane Brockman, Anthropology; and Dr. Irina Nesmelova; Physics and Optical Sciences) were informed of the proposed addition and asked for any input. Their input was incorporated into the final proposal.

## F. INITIATION, ATTACHMENTS AND CONSIDERATION OF THE PROPOSAL

### 1. Originating Unit

The Biology Graduate Faculty initiated discussions for development and implementation of several new graduate level courses in the Fall 2012. Valery Grdzlishvili developed this course to meet the growing needs for students in the fields of biotechnology, biomedicine, health related fields, and molecular and cellular bases of disease. The Graduate Committee voted on the proposal and unanimously passed on November 18, 2013. The Department of Biology Graduate faculty voted on the proposal and unanimously passed on November 22, 2013.

### 2. Credit Hour

The Graduate Committee in the Department of Biology has reviewed the course syllabus and has agreed that the new course should receive 3 credit hours.

### 3. Attachments

a. Course Syllabus attached

b. Proposed Catalog Copy

For a new course or revisions to an existing course, check all the statements that apply:

This course will be cross listed with another course.  
4000 and 5000 level designations

There are prerequisites for this course.

Admission to graduate school in Biology or permission from the instructor

There are corequisites for this course.

This course is repeatable for credit.

This course will increase/decrease the number of credits hours currently offered by its program.

This proposal results in the deletion of an existing course(s) from the degree program and/or catalog.

**BIOL 5167. Medical Genetics.** (3) Prerequisites: Admission to graduate school in Biology or permission from the instructor. Various applications of genetics to human health, including studies of the inheritance of diseases in families, mapping of disease genes to specific locations on chromosomes, analyses of the molecular mechanisms through which genes cause disease, diagnosis and treatment of genetic disease, and genetic counseling. (*On demand*)

#### **4. Student Learning Outcomes**

Learning outcomes will be assessed using tests, a final exam, This is a cross referenced course with BIOL4167. Graduate students in BIOL5167 will each present one original paper in the field of “Medical Genetics”. Graduate students will demonstrate their abilities to deliver professional scientific presentation as well as to show their in-depth understanding of how contemporary genetic experiments are designed, conducted, interpreted and reported (see Syllabus). This work will constitute 15% of the BIOL 5167 grade.

#### **5. Textbook Costs: *Have electronic textbooks, textbook rentals, or the buyback program been considered and adopted?***

REQUIRED TEXTBOOK: Medical Genetics: With STUDENT CONSULT Online Access, Jorde L.B., Carey J.C., Bamshad M.J. 2009, 4 edition, ISBN-13: 978-0323053730.

Students are encouraged to purchase used copies or rent the text when possible. Other materials are provided through Moodle 2.



# Medical Genetics

## Tentative Syllabus

[BIOL 5000-level course]

Type	Time	Days	Where	Date Range	Schedule Type
Class	9:am – 11:45am	F	TBA	TBA	Lecture

Instructor: **Dr. Valery Grdzlishvili, Ph.D., Associate Professor**

Biology Department (office: Woodward Hall 486B), Phone: (704) 687-7778,

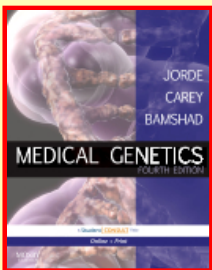
E-mail: [vzgrdzl@uncc.edu](mailto:vzgrdzl@uncc.edu)

Course URL: UNCC Moodle: <https://moodle2.uncc.edu/>

Instructor's URL: <http://clas-pages.uncc.edu/valery-grdzlishvili/>

*Course objectives.* This course will provide up-to-date information about various applications of genetics to human health, including studies of the inheritance of diseases in families, mapping of disease genes to specific locations on chromosomes, analyses of the molecular mechanisms through which genes cause disease, diagnosis and treatment of genetic disease, and genetic counseling, in which information regarding risks, prognoses, and treatments is communicated to patients and their families. This course will also cover the social implications of novel genetic technologies, the Human Genome Project, cloning, embryonic stem cell research, and more. During this course, several original papers in the field of "Medical Genetics" will be discussed, so students could learn in depth how contemporary genetic experiments are designed, conducted, interpreted and reported.

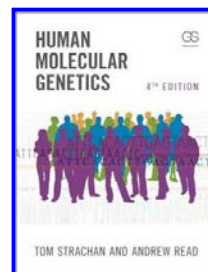
Each graduate student will present one original paper in the field of "Medical Genetics". Graduate students will demonstrate their abilities to deliver professional scientific presentation as well as to show their in-depth understanding of how contemporary genetic experiments are designed, conducted, interpreted and reported.



**REQUIRED TEXTBOOK:** Medical

**Genetics: With STUDENT CONSULT Online Access, Jorde L.B., Carey J.C., Bamshad M.J. 2009, 4 edition.**

**ISBN-13: 978-0323053730**



**EXTRA READING:**

**Human Molecular Genetics, Strachan T., Read A., 2010, 4 edition.**

**ISBN-13: 978-0815341499**

## TOPICS:

<i>Topic</i>	<i>"Medical genetics" (Jorde) Textbook Chapter</i>
REVISITING CELL BIOLOGY: STRUCTURE AND FUNCTION OF GENES AND CHROMOSOMES	Ch. 1-2
GENETIC VARIATION: ITS ORIGIN AND DETECTION	Ch. 3
AUTOSOMAL DOMINANT AND RECESSIVE INHERITANCE	Ch. 4
<b>Test 1 (45 min)</b> SEX-LINKED AND NONTRADITIONAL MODES OF INHERITANCE	Ch. 5
CLINICAL CYTOGENETICS: THE CHROMOSOMAL BASIS OF HUMAN DISEASE	Ch. 6
BIOCHEMICAL GENETICS: DISORDERS OF METABOLISM	Ch. 7
<b>Test 2 (45 min)</b> GENE MAPPING AND IDENTIFICATION	Ch. 8
IMMUNOGENETICS	Ch. 9
DEVELOPMENTAL GENETICS	Ch. 10
CANCER GENETICS	Ch. 11
GENETIC TESTING OF INDIVIDUALS AND POPULATION SCREENING	Ch. 13, part 1
<b>Test 3 (45 min)</b> MULTIFACTORIAL INHERITANCE AND COMMON DISEASES	Ch. 12
<b>Paper Presentation by Graduate Student 5 (on a previous topic)</b> GENE THERAPY PARMACOGENETICS AND PERSONALIZED MEDICINE	Ch. 13, part 2 Ch. 14
<b>Test 4 (45 min)</b> CLINICAL GENETICS AND GENETIC COUNSELING ETHICAL AND SOCIAL ISSUES IN CLINICAL GENETICS	Ch. 15
<b>FINAL EXAM (DATE, PLACE, TIME - TBA)</b>	

## GRADING:

1. Letter grades will be assigned on a 5-point scale (90-100% = A; 80-89% = B; 70-79% = C; 60-69% + D; < 60% = U)
2. **BIOL4167 GRADING SCHEME** - the following will be used to determine your grade:
  - 4 mid-terms tests (45-min) = 15% of final grade each (60% total contribution)
  - Final Exam = 40% of final grade

**BIOL5167 GRADING SCHEME** - the following will be used to determine your grade:

- 4 mid-terms tests (45-min) = 15% of final grade each (60% total contribution)
  - original paper presentation = 15% of final grade
  - Final Exam = 25% of final grade
3. **If you missed your test**, you will lose 5 points (per test) from your final grade and your final Exam will have a higher contribution.
  4. **Bonus points:**
    - If you attended every single lecture (**with less than 15 min absence from each class**), you will get extra **2 bonus points** to your final grade
    - If you attended all lectures (**with less than 15 min absence from each class**) but one, you will get extra **1 bonus point** to your final grade

But, you cannot get these bonus points if you missed the required number of lectures regardless of your excuse.

### Class attendance and other policies:

1. Attendance is strongly recommended (**remember about bonus points**)!
2. Do not schedule your "doctor appointments, interviews" etc. during class.
3. Do not be late for the class (you lose your bonus point if late or leave > 15 minutes).
4. No walking in/out during the class (unless an emergency).
5. **NO CELL PHONES/PDAs! CELL PHONES cannot be used as calculators! Laptops – only for making notes.**
6. Make-up exams will be permitted ONLY for serious illness and mandatory UNCC policies. A physicians' note will be required for illness.
7. Please, use only official UNCC e-mail address for all our communications, it is your responsibility to check your e-mail periodically in case there are some changes
8. Concepts are the key – try to understand not to memorize.

**Code of Student Academic Integrity:** *Students have the responsibility to know and observe the requirements of the UNC Charlotte Code of Student Academic Integrity. This code forbids cheating, fabrication or falsification of information, multiple submission of work, plagiarism, abuse of academic materials, and complicity in academic dishonesty.* <http://legal.uncc.edu/policies/up-407>

**Disability Resource:** *If you have a disability that qualifies you for academic accommodations, please provide a letter of accommodation from Disability Services in the beginning of the semester. For more information regarding accommodations, please contact the Office of Disability Services at 704-687-4355 or stop by their office in Fretwell 230* <http://ds.uncc.edu/sitemap>

**Religious accommodations:** *Students will be provided reasonable accommodations for religious obligations in accordance with University Policy #409: Religious Accommodation for Students (<http://legal.uncc.edu/policies/up-409>). This policy (1) authorizes a minimum of two excused absences each academic year for religious observances as required by the faith of a student; and (2) provides students the opportunity to make up any missed work. Students are asked to submit their request for religious accommodation to faculty prior to the census date of each semester.*

***UNC Charlotte strives to create an academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity, which includes, but is not limited to, disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.***



J. Murrey Atkins Library

Consultation on Library Holdings

To: Dr. Valery Grdzlishvili

From: Dr. Melanie Sorrell

Date: 9/12/13

Subject: BIOL 4000/5000: Medical Genetics

Summary of Librarian's Evaluation of Holdings:

Evaluator: Melanie Sorrell

Date: 9/12/13

Check One:

- 1. Holdings are superior \_\_\_\_\_
- 2. Holdings are adequate   x
- 3. Holdings are adequate only if Dept. purchases additional items. \_\_\_\_\_
- 4. Holdings are inadequate \_\_\_\_\_

Comments:

This is a proposal to reinstate undergraduate and graduate level courses, which include student presentations on previous topics. Library holdings should be adequate to support student research for this course (see list of items held by subject heading below). Students will have access to relevant databases including Biological Sciences, PubMed, Science Direct, Web of Science, Springer Link, and Science Reference Center.

LC Subject Heading	Total items held
Medical genetics	160 monographs
Genetic Diseases, Inborn -- genetics	25 monographs
Cytogenetics	58 monographs
Gene mapping	15 monographs
Pharmacogenetics	12 monographs
Genetics in medicine : official journal of the American College of Medical Genetics	Journal title
Cancer genetics and cytogenetics	Journal title

*Melanie Sorrell*

\_\_\_\_\_  
Evaluator's Signature

9/12/13  
\_\_\_\_\_

Date

On Apr 19, 2014, at 11:09 PM, "Mays, Larry" <[lemays@uncc.edu](mailto:lemays@uncc.edu)> wrote:

Dear Valery,

I consulted with some of my faculty by email this weekend. We note that while there is some overlap in topics between our courses and BIOL 5167, we do not have a single course that covers all of these topics. We think that your BIOL 5167 is an important addition and our Department wholeheartedly supports it.

Larry Mays

**From:** <Grdzlishvili>, Valery <[vzgrdznel@uncc.edu](mailto:vzgrdznel@uncc.edu)>

**Date:** Saturday, April 19, 2014 at 7:54 AM

**To:** Lawrence Mays <[lemays@uncc.edu](mailto:lemays@uncc.edu)>

**Cc:** "Klotz, Martin" <[mklotz@uncc.edu](mailto:mklotz@uncc.edu)>

**Subject:** URGENT - possible overlap with my "Medical Genetics" course

Dear Larry,

I am trying to reinstate BIOL 5167 "Medical Genetics" course to the Biology graduate program and the UNC Charlotte course catalog (a parallel companion BIOL 4167 course is already approved).

This graduate course BIOL 5167 had been offered until 2004 by Dr. Ronald Ostrowski as BIOL 5167 "Medical Genetics". Unfortunately, while I was redeveloping this course, it was removed from UNC Charlotte catalog.

Thus since that time I have taught the course two times in the Spring 2011 and Fall 2012 semesters as a temporary section of "Topics in Biology" [BIOL 5000 - D01]. This course has been well received and has consistently high enrollment among Biology graduate

students.

The Graduate Council asked to me make some changes to the proposal. Among other requests, they asked me to:

- **Please check with Bioinformatics (Dr. Larry Mays) for a possible overlap with existing courses in Bioinformatics.**

I don't think it has any significant overlap with any of your graduate courses (it is basically "genetics of human diseases"), but could you, please, clarify this issue? The pending proposal (including tentative syllabus that I need to correct) is attached for your review.

I would greatly appreciate it if you could respond as soon as possible as we need to resubmit my proposal by **April 22**.

Thank you for your help!

Best wishes,

Valery



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Valery Z. Grdzlishvili, Ph.D. | Associate Professor  
University of North Carolina at Charlotte | Department of Biology, Woodward  
486B  
9201 University City Blvd. | Charlotte, NC 28223  
Phone (office): 704-687-7778 | Phone (lab): 704-687-8521 | Fax: 704-687-1488  
[vzgrzel@uncc.edu](mailto:vzgrzel@uncc.edu) | <http://clas-pages.uncc.edu/valery-grdzlishvili>  
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If you are not the intended recipient of this transmission or a person responsible for delivering it to the intended recipient, any disclosure, copying, distribution, or other use of any of the information in this transmission is strictly prohibited. If you have received this transmission in error, please notify me immediately by reply e-mail or by telephone at 704-687-7778. Thank you.

## **Response to Reviewers of BIOL 5167**

(see BIOL112213cREVISED-2 file containing all the corrections)

**Comment 1:** Please check with Bioinformatics (Dr. Larry Mays) for a possible overlap with existing courses in Bioinformatics.

**Response:** Dr. Larry Mays has been contacted regarding this issue, and he replied by email indicating support for reinstatement.

**Comment 2:** Revise grading scale, incomplete.

**Response:** the grading scale was corrected and is complete now.

**Comment 3:** Text book is 2009, with this rapidly changing field, is this correct?

**Response:** Yes, the required textbook is corrected. Dr. Grdzlishvili compared several textbooks and found this textbook most appropriate for this course. In addition, Dr. Grdzlishvili's lecture material will cover new findings in the field discovered after 2009.

**Comment 4:** The 'on demand' found in section C #2a does not match syllabus. The syllabus lists a spring break and a spring recess, please revise, this implies two weeks. The syllabus is clearly designed for a spring course. A more generic semester agenda for the syllabus is recommended.

**Response:** The syllabus is corrected and is more generic now, as recommended.

**Comment 5:** There needs to be a statement in the proposal that a parallel proposal has been submitted for the companion BIOL 4167 course.

**Response:** The statement is added to the Summary (A.1.)

**Comment 6:** The syllabus indicates that grading is based entirely on four mid-term tests and a final exam. However, the syllabus also requires an original paper from graduate students, but does not indicate how that paper will be incorporated into overall grading.

**Response:** The mistake has been corrected, the following scheme is added for graduate BIOL5167 course students:

- |                               |  |
|-------------------------------|--|
| - 4 mid-terms tests (45-min)  | = 15% of final grade each (60% total contribution) |
| - original paper presentation | = 15% of final grade                               |
| - Final Exam                  | = 25% of final grade                               |

**Comment 7:** There is no graduate grading scheme included in the syllabus.

**Response:** The corrected syllabus has now one scheme for undergraduate (BIOL4167) and another scheme for graduate (BIOL5167) students.