

# FLORIDA ATLANTIC UNIVERSITY™

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## Graduate Programs—NEW COURSE PROPOSAL

**DEPARTMENT NAME:**  
Basic Science

**COLLEGE OF:**  
Charles E. Schmidt College of Biomedical Science

**RECOMMENDED COURSE IDENTIFICATION:**  
 PREFIX   BMS   COURSE NUMBER   6603   LAB CODE (L or C) \_\_\_\_\_  
 (TO OBTAIN A COURSE NUMBER, CONTACT ERUDOLPH@FAU.EDU)  
 COMPLETE COURSE TITLE Molecular Genetics of the Cell

**EFFECTIVE DATE**  
 (first term course will be offered)  
SPRING 2011

**CREDITS: 3**

**TEXTBOOK INFORMATION:**  
Molecular Biology of the Cell. Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter. Garland Science, Fourth Edition. – recommended.  
Thompson & Thompson Genetics in Medicine. Robert L. Nussbaum, MD, Roderick R. McInnes, MD, PhD, FRS(C) and Huntington F. Willard, PhD Elsevier, 7th Edition. – recommended.

**GRADING (SELECT ONLY ONE GRADING OPTION):** REGULAR  PASS/FAIL \_\_\_\_\_ SATISFACTORY/UNSATISFACTORY \_\_\_\_\_

**COURSE DESCRIPTION, NO MORE THAN 3 LINES:**  
 This course is designed to provide students with a basic background in cell and molecular biology. Emphasis will be placed on human physiology and disease.

<b>PREREQUISITES W/MINIMUM GRADE:*</b> BCH 3033 Biochemistry 1 or PCB 3063 Molecular & Cell Biology or equivalents. Minimum Grades: B-	<b>COREQUISITES:</b>	<b>OTHER REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL):</b> Graduate Students Only
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**PREREQUISITES, COREQUISITES & REGISTRATION CONTROLS SHOWN ABOVE WILL BE ENFORCED FOR ALL COURSE SECTIONS.**  
 \*DEFAULT MINIMUM GRADE IS D-

**MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE:**  
 Ph.D.

Other departments, colleges that might be affected by the new course must be consulted. List entities that have been consulted and attach written comments from each. Department of Biology

Marc Kantorow, Ph.D, [mkantoro@fau.edu](mailto:mkantoro@fau.edu), tel: 297-2910

Faculty Contact, Email, Complete Phone Number

**SIGNATURES** **SUPPORTING MATERIALS**

<p><b>Approved by:</b></p> <p>Department Chair: _____ </p> <p>College Curriculum Chair: _____ </p> <p>College Dean: _____ </p> <p>UGPC Chair: _____</p> <p>Dean of the Graduate College: _____</p>	<p><b>Date:</b></p> <p><u>3-16-10</u></p> <p><u>3-16-10</u></p> <p><u>3-16-10</u></p> <p>_____</p> <p>_____</p>	<p><b>Syllabus</b>—must include all details as shown in the UGPC Guidelines.</p> <p><b>Written Consent</b>—required from all departments affected.</p> <p>Go to: <a href="http://graduate.fau.edu/gpc/">http://graduate.fau.edu/gpc/</a> to download this form and guidelines to fill out the form.</p>
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Email this form and syllabus to [diamond@fau.edu](mailto:diamond@fau.edu) and [eqirjo@fau.edu](mailto:eqirjo@fau.edu) one week **before** the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website by committee members prior to the meeting.

## MOLECULAR GENETICS OF THE CELL

**Course Number:** BMS 6603

**Prerequisites:** BCH 3033 & PCB 4023

**Co-requisites:** None

**Instructor:** Dr. Marc Kantorow

**Office:** BC 71, Room 207

**Tel:** 297-2910 office /297-2918 lab

**Email:** [mkantoro@fau.edu](mailto:mkantoro@fau.edu)

**Office hours:** Fridays 2-4:30 or by appointment

### **Recommended Textbooks:**

Molecular Biology of the Cell. Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter. Garland Science, Fourth Edition.

Thompson & Thompson Genetics in Medicine. Robert L. Nussbaum, MD, Roderick R. McInnes, MD, PhD, FRS(C) and Huntington F. Willard, PhD Elsevier, 7th Edition.

**Bibliography:** Up to date literature will be selected year to year.

**Course Description:** MCB is a course designed to provide students with a basic background in cell and molecular biology. Emphasis will be placed on human physiology and disease. Although some review level introductory information will be presented, this is a graduate course and it is strongly recommended that students complete undergraduate Cell Biology and Biochemistry as prerequisites for this course.

### **Instructional objectives:**

To understand those molecular mechanisms that control cellular physiology and to learn how inheritance functions in the regulation of these systems with an emphasis on understanding the mechanisms that underlie human genetic diseases.

**COURSE SCHEDULE:** The instructor reserves the right to alter the schedule or content of the course at anytime.

### January 2009

Tuesday 6<sup>th</sup>: Intro to the Course

Thursday 8<sup>th</sup>: Genetic Transfer in Cells

Tuesday 13<sup>th</sup>: DNA Structure and Function

Thursday 15<sup>th</sup>: Cellular Genomes and Nuclear Structure

Tuesday 20<sup>th</sup>: Cellular and DNA Replication

Thursday 22<sup>nd</sup>: DNA Repair and Mutagenesis

Tuesday 27<sup>th</sup>: RNA Synthesis

Thursday 29<sup>th</sup>: RNA processing

### February 2009

Tuesday 3<sup>rd</sup>: Regulation of Prokaryotic Gene Expression

Thursday 5<sup>th</sup>: Regulation of Eukaryotic Gene Expression

Tuesday 10<sup>th</sup>: Synthesis and Transport of Proteins

Thursday 12<sup>th</sup>: Technology I

Tuesday 17<sup>th</sup>: Technology II

Thursday 19<sup>th</sup>: Exam Preparation Day

Tuesday 24<sup>th</sup>: In Class Review

### **Thursday 26<sup>th</sup> EXAM I**

### March 2009

Tuesday 3<sup>rd</sup>: SPRING BREAK

Thursday 5<sup>th</sup>: SPRING BREAK

Tuesday 10<sup>th</sup>: Cell Structure and Function-*Dr. Wanda Lee Kantorow*

Thursday 12<sup>th</sup>: Cell Membrane Structure and Function-*Dr. Wanda Lee Kantorow*

Tuesday 17<sup>th</sup>: Signal Transduction-*Dr. Lisa Brennan*

Thursday 19<sup>th</sup>: Cell Biology of Cancer-*Dr. Lisa Brennan*

Tuesday 24<sup>th</sup>: Cell Biology of Immunity-*Dr. Lisa Brennan*

### April 2009

Thursday 2<sup>nd</sup>: STUDENT PRESENTATIONS

Tuesday 7<sup>th</sup>: STUDENT PRESENTATIONS

Thursday 9<sup>th</sup>: STUDENT PRESENTATIONS

Tuesday 14<sup>th</sup>: STUDENT PRESENTATIONS

Thursday 16<sup>th</sup>: Exam Preparation Day

Tuesday 21<sup>st</sup>: In Class Review

### **FINAL EXAM-DAY AND TIME TBA**

#### **Assessment Procedures:**

Students will be expected to give group presentations on topics presented in the course. Students will each prepare and submit 2 exams questions for their individual presentations. Students will be evaluated based on their cumulative performance on one mid-term and one final exam. Exams will be cumulative and will include material and questions presented by students. Slides used in lectures will be accessible to students. Attendance is not mandatory but students are responsible for knowing all information presented during the lecture exceeding the information on the slides.

**Grading criteria:** 90-100A; 80-90B; 70-80C; 60 below F.

**Academic Honor Code:**

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility.

The FAU Honor Code requires a faculty member, student, or staff member to notify an instructor when there is reason to believe an academic irregularity is occurring in a course. The instructor must pursue any reasonable allegation, taking action where appropriate. The following constitute academic irregularities:

1. The use of notes, books or assistance from or to other students while taking an examination or working on other assignments, unless specifically authorized by the instructor, are defined as acts of cheating.
2. The presentation of words or ideas from any other source as one's own is an act defined as plagiarism.
3. Other activities that interfere with the educational mission of the University.

For full details of the FAU Honor Code, see University Regulation 4.001 at [www.fau.edu/regulations/chapter4/4.001\\_Honor\\_Code.pdf](http://www.fau.edu/regulations/chapter4/4.001_Honor_Code.pdf).

**Students With Disabilities**

In compliance with the American Disabilities Act (ADA), students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) – in Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures.

**Julie Sivigny**

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**From:** David Binninger [binninge@fau.edu]  
**Sent:** Wednesday, March 17, 2010 11:47 AM  
**To:** Julie Sivigny  
**Cc:** Rodney Murphey  
**Subject:** Fwd: Biomedical Science New Course Proposals

Good morning,

I circulated the syllabi for the new courses listed in your e-mail (see below) to the faculty who could make comments. I did not receive any responses that raised questions or noted a significant overlap with any of our graduate courses. Please let me know if you have any questions.

I hope this is helpful and good luck with the remainder of the process toward approval of the courses.

Regards,  
David

David M. Binninger, Ph.D.  
Associate Professor and Associate Chair  
Department of Biological Science  
and  
Center for Molecular Biology and Biotechnology  
Florida Atlantic University  
777 Glades Road  
Boca Raton, FL 33431 USA  
Phone: (561) 297-3323  
FAX: (561) 297-2749

Begin forwarded message:

**From:** Julie Sivigny <[jsivigny@fau.edu](mailto:jsivigny@fau.edu)>  
**Date:** March 15, 2010 1:38:27 PM EDT  
**To:** 'David Binninger' <[binninge@fau.edu](mailto:binninge@fau.edu)>  
**Subject:** **Biomedical Science New Course Proposals**

Dear Dr. Binninger,  
Thank you for your assistance with this process. We are submitting a total of 10 new course proposals and 2 changes. All syllabi were forwarded to Dr. Murphey but in multiple batches so if you are missing any please let me know and I'll send to you immediately.

**Biomedical Science New Course Proposals:**  
Host Defense & Inflammation – Dr. Yoshimi Shibata  
Molecular Neuropsychopharmacology – Drs. Isgor and Tao  
Macromolecules and Human Disease – Drs. Brew and Li  
Adult Neurogenesis – Dr. Jianning Wei  
Molecular Basis of Disease & Therapy – Dr. Caputi

3/17/2010

Tumor Immunology – Dr. Vijaya Iragavarapu  
Molecular Genetics of the Cell – Dr. Kantorow  
Molecular Basis of Human Cancer – Dr. Lu  
Problem-based Immunology – Dr. Nouri-Shirazi  
Fundamentals of General Pathology – Dr. Levitt

The integrated morphology courses will be processed as changes. We previously offered two 3-credit courses: Human Gross Anatomy – Trunk and Human Gross Anatomy – Extremities. We are changing these to 4-credit courses with the titles *Integrated Morphology I and II* taught by Drs. Willis Paull, Rainald Schmidt-Kastner and Deborah Cunningham.

The graduate college submission deadline is Wednesday March 17<sup>th</sup> at noon. I apologize for the lateness of some of these requests and appreciate your effort to assist us.

Please let me know if I can provide any additional information.  
Thank you.  
Julie

*Julie A. Sivigny*  
*Academic Program Specialist*  
*Charles E. Schmidt College of Biomedical Science*  
*Florida Atlantic University*  
*(561) 297-2216*

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**From:** David Binninger [<mailto:binninge@fau.edu>]  
**Sent:** Monday, March 15, 2010 11:16 AM  
**To:** Julie Sivigny  
**Cc:** Rodney Murphey; Jay Lyons  
**Subject:** Fwd: Biomedical Science New Course Proposal - Macromolecules & Human Disease

Good morning Julie,

I forwarded the syllabi for the new courses to the appropriate faculty last week. It's my opinion that there will not be any issues or conflicts. So far, I have had only one response and that was that there were no concerns. Please confirm the full list of new courses and when you need a statement from me.

I hope this is helpful and please let me know if you have any questions.

Regards,  
David

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and  
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