

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>NEW COURSE PROPOSAL</b> <b>Graduate Programs</b>		UGPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Biomedical Science College Medicine <i>(To obtain a course number, contact erudolph@fau.edu)</i>		
Prefix <b>GMS</b> Number <b>6841</b>	<i>(L = Lab Course; C = Combined Lecture/Lab; add if appropriate)</i> <b>Lab Code</b>	<b>Type of Course</b> Lecture	<b>Course Title</b> Biomedical Concepts and Translational Applications
<b>Credits</b> <i>(Review Provost Memorandum)</i> <b>3</b>	<b>Grading</b> <i>(Select One Option)</i> Regular <input checked="" type="radio"/> Sat/UnSat <input type="radio"/>	<b>Course Description</b> <i>(Syllabus must be attached; see Guidelines)</i> This course is a comprehensive one semester fundamental course intended for biomedical majors. It is designed to provide cutting-edge, high-interest topics in the field of human health to Ph.D and Masters' students in Biomedical Sciences. In this course, students explore the concepts of biology in different fields and how they are related to human health. The course also provides students with translational applications to clinical health problems, and allows considerable flexibility in tailoring their course of study to suit their educational goals.	
<b>Effective Date</b> <i>(TERM &amp; YEAR)</i> Fall 2018	<b>Prerequisites</b> None		
<b>Prerequisites</b> None		<b>Corequisites</b> None	<b>Registration Controls</b> <i>(Major, College, Level)</i> Instructor Permission Required
<b>Prerequisites, Corequisites and Registration Controls are enforced for all sections of course</b>			
<b>Minimum qualifications needed to teach course:</b> Member of the FAU graduate faculty and has a terminal degree in the subject area (or a closely related field.)		<b>List textbook information in syllabus or here</b>	
<b>Faculty Contact/Email/Phone</b> Dr. Yoshimi Shibata/yshibata@health.fau.edu/(561) 297-0606 Dr. Hanning Wei/wei@health.fau.edu/(561)		<b>List/Attach comments from departments affected by new course</b>	

<b>Approved by</b> Department Chair <u>Janet Bobshaw</u> College Curriculum Chair <u>Janet Bobshaw</u> College Dean <u>Hanning Wei</u> UGPC Chair _____ UGC Chair _____ Graduate College Dean _____ UFS President _____ Provost _____	<b>Date</b> <u>6/1/18</u> <u>8/10/18</u> <u>6/4/18</u> _____ _____ _____ _____
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Email this form and syllabus to [UGPC@fau.edu](mailto:UGPC@fau.edu) one week before the UGPC meeting.

GRADUATE COLLEGE

AUG 13 2018

Received

**BIOMEDICAL CONCEPTS AND TRANSLATIONAL APPLICATIONS**

**PCB6933.** Three (3) credits  
**Pre-requisites:** Ph.D. students --- Mandatory; MS students--- By permission only  
**Place:** Rm 214  
**Time:** 1-2:20pm, Tuesday/Thursday  
**Office hours:**  
**Course Co-directors:** Drs. Yoshimi Shibata, Jianning Wei  
**Course Offered:** see the Table of schedule

**Course Description**

This course is a comprehensive one semester fundamental course intended for biomedical majors. It is designed to provide cutting-edge, high-interest topics in the field of human health to Ph.D and Masters' students in Biomedical Sciences. In this course, students explore the concepts of biology in different fields and how they are related to human health. The course also provides students with translational applications to clinical health problems, and allows considerable flexibility in tailoring their course of study to suit their educational goals.

**Learning objectives**

1. Be able to understand the key fundamental elements in comprehensive biomedical research fields related to human health.
2. Be familiar with the current advances and challenges in comprehensive biomedical research fields related to human health.
3. Be able to synthesize and analyze information from literature in comprehensive biomedical research fields related to human health.

**Lectures**

Date	Description
<b>Topic 1: From DNA to protein:</b>	
8/21	Dr. Zhongwei Li
8/23	Dr. Zhongwei Li/Dr. Keith Brew
8/28	Dr. Keith Brew: Note: Rm314
<b>Topic 2: Cell Cycle and disease</b>	
8/30	Dr. Michael Lu
9/4	Dr. Michael Lu
<b>Topic 3: From cells to tissues:</b>	
9/6	Vascular system (Dr. Howard Prentice)
9/11	Retina (Dr. Wen Shen)
<b>Topic 4: Development and disease: embryology</b>	
9/13	Dr. Rainald Schmidt-Kastner
9/18	Dr. Rainald Schmidt-Kastner
<b>Topic 5: Cardiovascular health:</b>	
9/20	Dr. Xupei Huang
9/25	Dr. Xupei Huang
<b>Topic 6: Autonomic system and health:</b>	
9/27	Dr. Rui Tao
<b>Topic 7: Reproductive medicine:</b>	
10/2	Dr. Darin Trelka
Mid-term exam	

GRADUATE COLLEGE

10/4	mid-term exam
<b>Topic 8: Immunology principles and medical practice:</b>	
10/9	Dr. Mahyar Nouri-Shirazi
10/11	Dr. Mahyar Nouri-Shirazi
<b>Topic 9: Bacterial and viruses in human health: the coming plague</b>	
10/16	Parasites: Malaria (Dr. Andrew Oleinikov)
10/18	Virus: HIV (Dr. Massimo Caputi)
10/23	Bacteria: tuberculosis (Dr. Yoshimi Shibata)
<b>Topic 10: Neurology and medical practice</b>	
10/25	Neurodevelopment (Dr. Kathleen Guthrie)
10/30	Adult CNS system (Dr. Jianning Wei)
<b>Topic 11: Epidemiology principles and applications:</b>	
11/1	Dr. James Cresanta
<b>Topic 12: Genomics and global analysis:</b>	
11/6	Bioinformatics (Dr. Zhongwei Li)
<b>Topic 13: Precision medicine:</b>	
11/8	Dr. Janet Robishaw
<b>Topic 14: Stem cell biology and Tissue engineering in medicine</b>	
11/13	Dr. Marc Kantorow/Dr. Janet Robishaw
11/15	Dr. Kevin Kang
<b>Student-engaged sessions</b>	
11/20	Student-engaged activities/presentations
11/22	No class: Thanksgiving
11/27	Student-engaged activities/presentations
11/29	Student-engaged activities/presentations
<b>Final exam (12/7-12/13)</b>	
12/4	Reading day
12/6	Final exam (10:30-1:00)

**Grading****Evaluation:**

- Attendance: 10%
- Presentation: 30% for Master students; 15% for Ph.D. students.  
Requirements: Each student will choose one biomedical topic that he/she is interested in (covered or not covered in class) and find a reference(s). Student prepares the following information in PowerPoint Slide format including Title, Background, how his/her topic is interesting/unique/new in human health, Conclusions, and References. Total slides will be no more than 10. The topic could be an advancing technology in the biomedical research, research breakthrough, and/or clinical outcomes, all of which potentially understand and improve human health. All slides will be uploaded 1 day before presentation. The presentation should be ~20 minutes including 5 minutes' discussions. Each student in the audience will provide a short criticism.
- Essay (Ph.D. students only): 15%.  
Requirements: Ph.D. students are required to submit a 5-page essay (single-spaced with references) on the topic of their interest by the end of the semester.
- Exam: mid-term 30%, final, 30%

**Grading criteria:**

A	100 – 90
B+	89 – 87
B	86 – 80
C	79 – 70
F	<70

**Course Policies** Makeup tests will only be given for a valid emergency or medical excuse. Papers must be submitted on time to receive credit unless the student has a valid emergency or medical excuse. Incompletes will not be recorded unless an approved emergency or medical excuse is provided by the student. Please refer to the FAU Catalog for policies regarding absences and incomplete grades.

**Classroom etiquette:** Please refer to the FAU Catalog and Student Handbook. Compliance with university rules and regulations is expected of all students.

**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 Student Accessibility Services – 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 SAS procedures.*