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|  FLORIDA ATLANTIC UNIVERSITY | NEW COURSE PROPOSAL Graduate Programs | | 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 GMS Number 6841 | <i>(L = Lab Course; C = Combined Lecture/Lab; add if appropriate)</i> Lab Code | Type of Course Lecture | Course Title Biomedical Concepts and Translational Applications |
| Credits <i>(Review Provost Memorandum)</i> 3 | Grading <i>(Select One Option)</i> Regular <input checked="" type="radio"/> Sat/UnSat <input type="radio"/> | Course Description <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. | |
| Effective Date <i>(TERM & YEAR)</i> Fall 2018 | | | |
| Prerequisites None | Corequisites None | Registration Controls <i>(Major, College, Level)</i> Instructor Permission Required | |
| <i>Prerequisites, Corequisites and Registration Controls are enforced for all sections of course</i> | | | |
| Minimum qualifications needed to teach course: Member of the FAU graduate faculty and has a terminal degree in the subject area (or a closely related field.) | List textbook information in syllabus or here | | |
| Faculty Contact/Email/Phone Dr. Yoshimi Shibata/yshibata@health.fau.edu/(561) 297-0606 Dr. Hanning Weil hweil@health.fau.edu/(561) | List/Attach comments from departments affected by new course | | |

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| Approved by Department Chair <u>Janet Adolphson</u> College Curriculum Chair <u>Janet Adolphson</u> College Dean <u>[Signature]</u> UGPC Chair <u>[Signature]</u> UGC Chair <u>[Signature]</u> Graduate College Dean <u>Khaled Soliman</u> UFS President _____ Provost _____ | Date <u>6/1/18</u> <u>8/10/18</u> <u>6/4/18</u> <u>8/22/18</u> <u>8/22/18</u> <u>8/22/2018</u> |
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Email this form and syllabus to 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

Course Co-directors: Drs. Yoshimi Shibata, Jianning Wei
Course Offered: see the Table of schedule
Office Hours: By appointment

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.

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 |
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| Topic 1: From DNA to protein: | |
| 8/21 | Introduction/Dr. Zhongwei Li |
| 8/23 | Dr. Zhongwei Li |
| 8/28 | Dr. Keith Brew |
| Topic 2: Cell Cycle and disease | |
| 8/30 | Dr. Michael Lu |
| 9/4 | Dr. Michael Lu |
| Topic 3: From cells to tissues: | |
| 9/6 | Respiration and the electron transport chain (Dr. Howard Prentice) |
| 9/11 | Retina (Dr. Wen Shen) |
| Topic 4: Development and disease: embryology | |
| 9/13 | Dr. Rainald Schmidt-Kastner |
| 9/18 | Dr. Rainald Schmidt-Kastner |
| Topic 5: Cardiovascular health: | |
| 9/20 | Dr. Xupei Huang |
| 9/25 | Dr. Xupei Huang |
| | |
| 9/27 | Virus: HIV (Dr. Massimo Caputi) |
| Topic 7: Reproductive medicine: | |
| 10/2 | Dr. Darin Trelka |
| 10/4 | Dr. Darin Trelka |

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| Topic 8: Immunology principles and medical practice: | |
| 10/9 | Dr. Mahyar Nouri-Shirazi |
| 10/11 | Dr. Mahyar Nouri-Shirazi |
| Topic 9: Bacterial and viruses in human health: the coming plague | |
| 10/16 | Parasites: Malaria (Dr. Andrew Oleinikov) |
| 10/18 | Rui Tao (autonomic system and function) |
| 10/23 | Bacteria: tuberculosis (Dr. Yoshimi Shibata) |
| Topic 10: Neurology and medical practice | |
| 10/25 | Adult CNS system (Dr. Jianning Wei) |
| 10/30 | Peripheral (Pain) -Dr. Larry Toll |
| Topic 11: Precision medicine: | |
| 11/1 | Dr. Janet Robishaw |
| Topic 12: Genomics and global analysis: | |
| 11/6 | Bioinformatics (Dr. Zhongwei Li) |
| Topic 13: Epidemiology principles and applications: | |
| 11/8 | Dr. Mario Jacomino |
| Topic 14: Stem cell biology and Tissue engineering in medicine | |
| 11/13 | Dr. Kevin Kang |
| Student-engaged sessions | |
| 11/15 | Student-engaged activities/presentations: CAR-T principles and translational applications |
| 11/20 | Student-engaged activities/presentations: iPSC principles and translational applications |
| 11/22 | No class: Thanksgiving |
| 11/27 | Student-engaged activities/presentations: microbiome principles and translational applications |
| 11/29 | Student-engaged activities/presentations: Gene silencing principles and translational applications |
| Final exam (12/7-12/13) | |
| 12/4 | Reading day |
| 12/6 | Essay questions due (10:30-1:00) |

Grading

Evaluation:

1. Attendance: 10%
2. Discussion and participation: 20%
3. Presentation: 30%

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.

4. Essay: 40%.

Grading criteria:

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| 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.

Disability policy statement: In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/.

Attendance Policy Statement

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

Counseling and Psychological Services (CAPS) Center:

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>