FLORIDA ATLANTIC UNIVERSITY™

Graduate Programs—NEW COURSE PROPOSAL

UGPC APPROVAL _____
UFS APPROVAL _____
SCNS SUBMITTAL _____
CONFIRMED _____
BANNER POSTED _____
CATALOG POSTED _____
WEB POSTED _____

DEPARTMENT NAME: BIOLOGICAL SCIENCES

COLLEGE OF: CHARLES E. SCHMIDT COLLEGE OF SCIENCE

RECOMMENDED COURSE IDENTIFICATION:

PREFIX _____PCB_____ **COURSE NUMBER** ____6849____ **LAB CODE** (L or C) _____

(*TO OBTAIN A COURSE NUMBER, GO TO www.fau.edu/academic/registrar/UUPCinfo/*)

COMPLETE COURSE TITLE CELLULAR NEUROSCIENCE & DISEASE

EFFECTIVE DATE

(first term course will be offered):

_____FALL 2008_____

CREDITS: 3

TEXTBOOK INFORMATION: From Neuron to Brain: A Cellular and Molecular Approach to the Function of the Nervous System, Fourth Edition by A. Robert Martin, Bruce G. Wallace, Paul A. Fuchs, and John G. Nicholls (Sinauer Associates ISBN-10: 0878934391 ISBN-13: 978-0878934393

GRADING (*SELECT ONLY ONE GRADING OPTION*): **REGULAR** __X____ **PASS/FAIL** _____ **SATISFACTORY/UNSATISFACTORY** _____

COURSE DESCRIPTION, NO MORE THAN 3 LINES: Cellular neuroscience is a special topic course that can be taken by both graduate and undergarduate students. It has a focus on the cellular aspect of human neurological diseases. We will analyze different signaling pathways and connect malfunctions in them to various neurological disorders.

PREREQUISITES: PCB 3063 Genetics

COREQUISITES: PCB 4023 Molecular and Cellular Biology

OTHER REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL): PERMISSION OF INSTRUCTOR

PREREQUISITES, COREQUISITES & REGISTRATION CONTROLS SHOWN ABOVE WILL BE ENFORCED FOR ALL COURSE SECTIONS

MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: P H.D. IN SCIENCE OR EQUIVALENT

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. **See attached statements from the Psychology Dept. and College of Biomedical Sciences**

Tanja A Godenschwege, godensch@fau.edu, 561-297-1390_____
Faculty Contact, Email, Complete Phone Number

SIGNATURES **SUPPORTING MATERIALS**

Approved by:	***Date:***
Department Chair: 	***03.26.2008***
College Curriculum Chair: _____	_____
College Dean: _____	_____
UGPC Chair: _____	_____
Dean, Graduate Studies: _____	_____

Syllabus—must include all details as shown in the UGPC Guidelines.

Written Consent—required from all departments affected.

Go to: www.fau.edu/graduate/gpc/index.php to download this form and guidelines to fill out the form.

Email this form and syllabus to sfulks@fau.edu and 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.

Syllabus

Course name: Cellular Neuroscience & Disease

Course number: PCB 6849

Pre-requisites: PCB 3063 Genetics

Co-requisites: PCB 4023 Molecular and Cellular Biology

Instructor: Tanja A Godenschwege

Office number: SC 209

Telephone: 561-297-1390

E-mail: godensch@fau.edu

Office hours: Monday-Friday 9:15am-10:30am, SC209

Required textbook: From Neuron to Brain: A Cellular and Molecular Approach to the Function of the Nervous System, Fourth Edition by A. Robert Martin, Bruce G. Wallace, Paul A. Fuchs, and John G. Nicholls (Sinauer Associates ISBN-10: 0878934391 ISBN-13: 978-0878934393)

Supplementary texts: recent research and review papers, which will be posted on blackboard or given as handouts**.**

Course description and instructional objectives: Cellular neuroscience with a focus on human neurological diseases and is a course that can be taken by graduate and undergraduate students. We will analyze different signaling pathways and connect developmental malfunctions in them to neurological disorders such as Alzheimer's, Parkinson's, Down syndrome, and Lou Gehrig's disease. We will examine molecular mechanisms involved in axon/dendrite growth and guidance, synapse formation, regeneration and degeneration. Finally, we will also cover electrical properties of neurons and muscles and their connections to ailments like Myasthenia Gravis and Cardiac Arrhythmias. Lectures will provide the students with the basic knowledge about cellular and molecular Neuroscience and will help them critically read and analyze original research

papers. Discussions, presentations and proposal writing are aimed to stimulate independent thinking about neuroscience research topics and enhance skills in scientific communication.

Method of instruction: Lectures, classroom exercises, single and group assigments, discussion, proposal writing and presentations.

Topics and schedule

1.) Introduction & Outline
2.) Neuron & Glia
3.) Neuron doctrine
4.) Ion channels and Action potential,
5.) Potassium channels and Long QT syndrome,
6.) Chemical Synaptic transmission,
7.) Acetylcholine receptors and Myasthenia gravis
8.) Motorneuron diseases
9.) Guidance of Axons & Dendrites
10.) Synapse formation & cell adhesion molecules
11) L1-CAM & CRASH syndrome
12) Review session
13.) Midterm Exam
14.) Test review and Competition Part1
15.) Competition Part2
16.) Amoyloid precursor protein & Alzheimer
17.) Alzheimer, Down syndrome and Patent
18.) Amoyloid precursor protein & endogenous function
19.) Neurotransmitter & Dopamine
20.) Dopamine and Parkinsons
21.) CNS & PNS Regeneration
22.) Scientific communication & Proposal outline
23.) Autism & Example of Proposal
24.) Discussion Proposals Part I
25.) Discussion Proposals Part I
26.) Intro to Neuroscience Seminar Intro

27.) Neuroscience Seminar Series

28.) Discussion of Neuroscience Lecture

29.) Proposal submission

30.) Review of Proposals

Assessment Procedures, Grading Criteria, Class Policies:

Dependent on the topics covered, may include attendence, midterm exam (class 13), homework assignments, presentations, class participation, and final proposal paper (class29).

Midterm Exam	20%
Attendance	10%
Assigments	20%
Participation	20%
Proposal Paper	30%

94-100%=A, 90-94%=A-, 86-90%=B+, 82-86%=B, 78-82%=B-, 74-78%=C+, 70-74%=C, 66-70%=C-, 62-66%=D+, 58-62%=D, 54-58%=D-, <54%=F; grades may be curved to adjust to 100%

It is the responsibility of the student to withdraw from this class, should that status be desired - the instructor cannot withdraw students from the course. The instructor will not give the grade of "I" in lieu of a grade of "D" or "F". The grade of "I" will be considered only in exceptional cases (such as serious illness) for students who are presently performing at a "C" or higher level in the course.

Midterm Exam. The material covered will include the material covered in class and the assigned readings. All students are expected to take the exams on the days they are scheduled. Makeup exams will be given only in exceptional circumstances and only if the student contacts the instructor BEFORE the exam. Some of the material covered in the lectures (and included on the exams) is NOT in the required texts

Homework assignments and papers. The papers and homework are due on the dates assigned. These will be accepted up to 1 week late, but they will be penalized. None will be accepted over 1 week late.)

Attendance. Students are expected to attend all scheduled classes. If you miss a class you are responsible for ALL the material covered during that class, including lecture material and rules and regulations about the course (such as penalties for late assignments, etc.).

From: David L Wolgin <wolgindl@fau.edu>
Date: March 12, 2008 10:53:41 AM EDT
To: David Binninger <binninge@fau.edu>
Subject: Re: New course proposal

David,

We have reviewed the new course proposal and it does not conflict with anything we offer in psychology. Looks like a great course!

Dave

Good afternoon,

Tanja Godenschwege is submitting a proposal for a new graduate course entitled Cellular Neuroscience and Disease. I have attached the new course proposal form and the syllabus that she provided. I would appreciate if you (or a faculty member that you designate) would review the syllabus and comment on whether the course would be in conflict with one currently offered in the psychology department.

Thank you and please feel free to contact me with your questions.

Regards,
David

Attachment converted: Macintosh HD:Godenschwege_1a.doc (W8BN/MSWD) (001B5BAB)
Attachment converted: Macintosh HD:Godenschwege_1b.doc (W8BN/MSWD) (001B5BAC)

--
David L. Wolgin, Ph.D.
Professor and Chair
Department of Psychology
Florida Atlantic University
Boca Raton, FL 33431
E-mail: WOLGINDL@FAU.EDU
Phone: 561/297-3366
Fax: 561/297-2160

From: Keith Brew <kbrew@ad.fau.edu>
Date: March 27, 2008 1:18:37 PM EDT
To: David Binninger <binninge@fau.edu>
Subject: Re: Neuroscience course proposal

Hi David,
The only Biomedical Science course that might be in conflict is given by John Wu. He was sent the information about Tanya's course but has not responded. I assume that this signifies his assent and, on that basis, we have no objection to the course.
Best regards,
Keith

Keith Brew, Ph.D.,
Schmidt Senior Fellow and Distinguished Professor,
Chair, Department of Basic Science
College of Biomedical Science,
Florida Atlantic University,
Boca Raton, FL 33431.
(561)-297-0407; FAX (561)-297-2519

On 3/27/08 1:10 PM, "David Binninger" <binninge@fau.edu> wrote:

Good afternoon,

Tanja is submitting a new course proposal entitled *Cellular Neuroscience & Disease*. I have attached the course proposal and syllabus that she is submitting. Please comment on whether the course would significantly overlap with a course offered in Biomedical Sciences.

Thank you for your assistance.

Regards,
David