

FLORIDA ATLANTIC UNIVERSITY™

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

Graduate Programs—NEW COURSE PROPOSAL ¹

DEPARTMENT: DEPARTMENT OF BIOLOGICAL SCIENCES

COLLEGE: CHARLES E. SCHMIDT COLLEGE OF SCIENCE

RECOMMENDED COURSE IDENTIFICATION:

PREFIX PCB COURSE NUMBER 5835 LAB CODE (L or C) C

(TO OBTAIN A COURSE NUMBER, CONTACT MJENNING@FAU.EDU)

COMPLETE COURSE TITLE: NEUROPHYSIOLOGY

EFFECTIVE DATE

(first term course will be offered)

FALL 2015

CREDITS ²: 3

TEXTBOOK INFORMATION:

- (1.) FROM NEURON TO BRAIN (5TH EDITION) [OPTIONAL]
- (2.) NEURONS IN ACTION (VERSION 2) [OPTIONAL]

GRADING (SELECT ONLY ONE GRADING OPTION): REGULAR R SATISFACTORY/UNSATISFACTORY _____

COURSE DESCRIPTION, NO MORE THAN THREE LINES:

Neurophysiology will bring the students closer to understanding neurophysiological signaling at the cellular level and whole animal through the use of actual wet and dry laboratory experiences supplemented with lectures. We will look at signaling from the perspective of the electrical properties of neurons and their signaling, the basis for all neuronal function. The students will learn through both theory and practical laboratory experiences and then translate their findings into modular reports.

PREREQUISITES*:

Graduate-level student or
Permission of Instructor.

COREQUISITES*:

REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL)*:

Permission of Instructor

* PREREQUISITES, COREQUISITES AND REGISTRATION CONTROLS WILL BE ENFORCED FOR ALL COURSE SECTIONS.

MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: MEMBER OF THE GRADUATE FACULTY OF FAU AND HAS A TERMINAL DEGREE IN THE SUBJECT AREA (OR A CLOSELY RELATED FIELD).

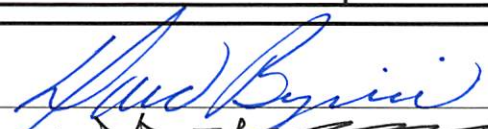




Faculty contact, email and complete phone number:

Ken Dawson-Scully, Ph.D.
KEN.DAWSON-SCULLY@FAU.EDU
 (561) 297-0337 Boca Raton
 (561) 799-8051 Jupiter

Please consult and list departments that might be affected by the new course and attach comments. ³

Psychology: Please see attached
 College of Medicine: Please see attached.
 Center for Complex Systems and Brain Sciences Please see attached

Approved by:

Department Chair: 
 College Curriculum Chair: 
 College Dean: 
 UGPC Chair: 
 Graduate College Dean: 
 UFS President: _____
 Provost: _____

Date:

10/30/14
10/30/14
10/30/14
11/5/14 11/9/14
11/15/14

1. Syllabus must be attached; see guidelines for requirements: www.fau.edu/provost/files/course_syllabus.2011.pdf
2. Review Provost Memorandum: **Definition of a Credit Hour** www.fau.edu/provost/files/Definition_Credit_Hour_Memo_2012.pdf
3. Consent from affected departments (attach if necessary)



Charles E. Schmidt College of Science
Department of Biological Sciences
777 Glades Road
Boca Raton, FL 33431
tel: 561.297-3320
fax: 561.297-2749

TO: University Graduate Programs Committee (UGPC)

FROM: Rodney Murphey, Ph.D.
Professor and Chair
Department of Biological Sciences

A handwritten signature in black ink, which appears to read 'Rodney Murphey for RM', is written over the printed name and title.

DATE: September 19, 2014

RE: New Course Proposal Consent

To Whom It May Concern:

This note constitutes acknowledgement and consent of the Department of Biological Sciences for the creation of a new course within the department: **PCB 5835C: Neurophysiology.**

Best Regards,

Rodney Murphey, Ph.D.
Chairman, Department of Biological Sciences
Director, Life Science Initiative on the MacArthur Campus

NEUROPHYSIOLOGY PCB 5835C
Fall 2015
FLORIDA ATLANTIC UNIVERSITY @ JUPITER CAMPUS

Professor/Instructor: *Ken Dawson-Scully*

Office: Research Expansion MC19, Rm 103

Phone: (561) 799-8051

email: ken.dawson-scully@fau.edu

Period/Semester: August 2015 – December 2015
COURSE CREDITS: 3
ROOM: RF MC17 214
CLASS HOURS: MONDAY AND FRIDAY, 1 PM – 4 PM
OFFICE HOURS: M and F 9A-10A

COURSE DESCRIPTION:

Neurophysiology will bring the students closer to understanding neurophysiological signaling at the cellular level and whole animal through the use of actual wet and dry laboratory experiences supplemented with lectures. We will look at signaling from the perspective of the electrical properties of neurons and their signaling, the basis for all neuronal function. The students will learn through both theory and practical laboratory experiences and then translate their findings into modular reports.

COURSE OBJECTIVES:

To expose students to the concept and principles of neurophysiological techniques:

- [1] Knowledge of Neurophysiological processes and extracellular techniques.
- [2] Use of Neurons in Action V2 simulator.
- [3] Ability to use the cricket as a neurophysiological preparation.
- [4] Ability to use the earthworm as a neurophysiological preparation.
- [5] Demonstrate [1] through [4] through written explanation.

COURSE PREREQUISITES:

Graduate-level student or permission of instructor.

ARTICULATION TO UNIVERSITY MISSION: This course addresses both the university mission statement as well as the strategic plan. This is accomplished by offering a high quality academic curriculum in a caring environment, stimulating creative initiative utilizing some problem based learning, research reviews, critical thinking and the development of both written and oral competencies. With the knowledge that the world and human needs are constantly changing, this course fosters motivated, self-directed analytical thinking, discusses current research in field and stresses a sense of ethical and social responsibility. Students in this course will develop an awareness of the contributions of scientists and practitioners from diverse

domestic and international backgrounds as well as biomedical and health issues that impact those living within and outside of our community. These goals are attained by providing quality instruction, class discussions or debates, discussions on various research topics, exams and written reports when applicable to help students attain their goals.

TEXT BOOK(S):

- i) From Neuron to Brain 5th edition – optional
- ii) Neurons in Action V2 - optional

EXAMINATIONS: There are no exams due to the practical nature of this course.

METHODS OF TEACHING:

Laboratory exercises both using computer simulation and invertebrates
Lectures and students' discussions
Audio-visuals: power points and overhead transparencies

LECTURE ETIQUETTE:

Every effort will be made by the professor to begin lectures promptly. Students wishing to exit while the lecture is in progress are expected to leave discreetly. The instructor and students will conduct themselves in a professional manner during the course of the lecture. Questions from students will be recognized at the discretion of the lecturer in a manner that is minimally disruptive to the lecture. **Cell phones and pagers should be shut off during lectures.**

ACADEMIC DISHONESTY POLICY:

All students are bound by the Academic Dishonesty Policy. Any student(s) caught either cheating and/or giving or receiving assistance during a testing session will automatically receive an F grade (0%) on that test or examination. Furthermore, the individual(s) will be referred to the Academic Dishonesty Committee of the University and to the Chair of the Department of Biological Sciences for additional disciplinary action.

STUDENT BEHAVIOR POLICY:

All FAU students are expected to behave according to accepted norms that ensure a climate wherein all can exercise their right to learn. Disruptive behavior is not acceptable in the classroom. Students engaging in such behavior may be asked to leave or may be moved from the class by security personnel. Actions such as violence, shouting, use of cell phones and/or beepers, using profanity, interrupting classes, and any other behavior that the instructor believes creates an unpleasant environment in the classroom will be grounds for withdrawal from the course, disciplinary/judicial proceedings, or failure of the course.

1. Religious Accommodations:

Students who wish to be excused from coursework, class activities or examinations must notify the instructor at least three weeks in advance of their intention to participate in religious

Grading scale: A= \geq 90%; B = 80-89%; C= 70-79%; D= 60-69; F= $<$ 60%.

CLASS SCHEDULE OF MATERIAL

SESSION 1: UP TO SEPT 4TH – LECTURES AND EQUIPMENT CALIBRATION
SESSION 2: UP TO SEPT 11TH – DATA ANALYSIS FROM CALIBRATION
SESSION 3: UP TO SEPT 18TH – COMPUTER SIMULATOR TRAINING
SESSION 4: UP TO OCT 2ND – ACTION POTENTIAL THRESHOLD
SESSION 5: UP TO OCT 16TH – ACTION POTENTIAL CONDUCTION VELOCITY
SESSION 6: UP TO OCT 26TH – EFFECT OF TEMPERATURE, Q_{10}
SESSION 7: UP TO NOV 13TH – REFRACTORY PERIOD OF NA CHANNELS
SESSION 8: UP TO DEC 4TH – STIMULUS FREQ/PHAMA/ION CONC

From: [Diane Baronas-Lowell](#)
To: [David Wolgin](#)
Cc: [Rodney Murphey](#); [Michelle Cavallo](#); ken.dawson-scully@fau.edu
Subject: RE: Practical Cell Neuroscience (BSC 6936), Human Neuroanatomy (BSC 6936), Neurophysiology (BSC 6936)
Date: Wednesday, September 10, 2014 11:41:46 AM

Thank you very much for your prompt reply Dave. I really appreciate your valuable time.

Have a wonderful semester!

Regards, Diane

Diane Baronas-Lowell, Ph.D.
Research Associate Professor
FAU-Neuroscience
Charles E. Schmidt College of Science
John D. MacArthur Campus
5353 Parkside Dr.
MC-19, RE Bldg., Room 107
Jupiter, FL 33458
561 799-8073 (work)
561 374-0469 (cell)

From: David Wolgin
Sent: Wednesday, September 10, 2014 11:37 AM
To: Diane Baronas-Lowell
Subject: Re: Practical Cell Neuroscience (BSC 6936), Human Neuroanatomy (BSC 6936), Neurophysiology (BSC 6936)

Diane,
The Department of Psychology has no objections to these courses.
Best,
Dave

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: Diane Baronas-Lowell <dlowell@fau.edu>
Date: Tuesday, September 9, 2014 1:42 PM
To: David Wolgin <wolgindl@fau.edu>
Cc: Rodney Murphey <RMURPHEY@fau.edu>
Subject: Practical Cell Neuroscience (BSC 6936), Human Neuroanatomy (BSC 6936), Neurophysiology (BSC 6936)

Dear Dr. Wolgin:

I hope this email finds you well.

I would like to have the following three courses formally recorded as new graduate courses:

1. BSC 6936 Practical Cell Neuroscience has been offered each spring beginning in 2010 (by Ken Dawson-Scully).
2. BSC 6936 Human Neuroanatomy was offered in Summer 2014 and will be held again in Spring 2015 (by Brenda Claiborne).
3. Ken has also recently developed an additional course titled Neurophysiology (BSC 6936) which is running during the current fall 2014 term.

In order to do so, I am filling out new graduate course proposal forms for each course and under the "Please consult and list departments that might be affected by the new course and attach comments" box, Rod Murphey suggested I list Psychology. Charles Roberts instructed me to ask for an email from you stating that your department has no objections to these courses.

Please be so kind to send me an email with your comments. Thank you very much for your time!

Regards, Diane

Diane Baronas-Lowell, Ph.D.
Research Associate Professor
FAU-Neuroscience
Charles E. Schmidt College of Science
John D. MacArthur Campus
5353 Parkside Dr.
MC-19, RE Bldg., Room 107
Jupiter, FL 33458
561 799-8073 (work)
561 374-0469 (cell)

From: [Diane Baronas-Lowell](mailto:Diane_Baronas-Lowell)
To: [Michelle Cavallo; ken_dawson-scully@fau.edu](mailto:Michelle_Cavallo; ken_dawson-scully@fau.edu)
Subject: FW: Advanced Neurophysiology Lab (BSC6930), Practical Cell Neuroscience (BSC 6936), Human Neuroanatomy (BSC 6936), Neurophysiology (BSC 6936)
Date: Monday, September 15, 2014 8:56:44 AM

Diane Baronas-Lowell, Ph.D.
Research Associate Professor
FAU-Neuroscience
Charles E. Schmidt College of Science
John D. MacArthur Campus
5353 Parkside Dr.
MC-19, RE Bldg., Room 107
Jupiter, FL 33458
561 799-8073 (work)
561 374-0469 (cell)

From: Janet Blanks
Sent: Monday, September 15, 2014 8:37 AM
To: Diane Baronas-Lowell
Cc: Rodney Murphey; Brenda Claiborne; Robert Stackman
Subject: RE: Advanced Neurophysiology Lab (BSC6930), Practical Cell Neuroscience (BSC 6936), Human Neuroanatomy (BSC 6936), Neurophysiology (BSC 6936)

Hi Diane,

The Center faculty confirmed their approval of the new Neuroscience courses proposed by the Biology Department. In fact, we will encourage our new students to take one or more of these courses as electives for our doctoral program.

I welcome the new courses, especially those that offer the students "hands on" experience in the lab where they can learn "state-of-the-art" techniques in Neurophysiology. Of course, I'm always happy to see students learn more Neuroanatomy!

My best,

Janet

From: Diane Baronas-Lowell
Sent: Friday, September 12, 2014 4:02 PM
To: Janet Blanks
Cc: Michelle Cavallo
Subject: FW: Advanced Neurophysiology Lab (BSC6930), Practical Cell Neuroscience (BSC 6936), Human Neuroanatomy (BSC 6936), Neurophysiology (BSC 6936)

Hi Janet:

Have you received any word from your faculty member about his thoughts on these courses? Does your center have any objections to these courses?

Thanks very much for your time. See you at the football game??

Best, Diane

Diane Baronas-Lowell, Ph.D.
Research Associate Professor
FAU-Neuroscience
Charles E. Schmidt College of Science
John D. MacArthur Campus
5353 Parkside Dr.
MC-19, RE Bldg., Room 107
Jupiter, FL 33458
561 799-8073 (work)
561 374-0469 (cell)

From: Janet Blanks
Sent: Thursday, September 11, 2014 8:41 AM
To: Diane Baronas-Lowell
Cc: Rodney Murphey
Subject: RE: Advanced Neurophysiology Lab (BSC6930), Practical Cell Neuroscience (BSC 6936), Human Neuroanatomy (BSC 6936), Neurophysiology (BSC 6936)

Hi Diane,

At the request of one of the Center faculty, would you please send me the syllabi for items #3 and #4 below. He wants to compare the topics in these two courses with Neuroscience 1 and 2 offered by the Center. I feel the "more Neuroscience the merrier"!

Saw Herb last night, he said he's almost ready to submit Arun's paper to PNAS - Yippee!

Jan

From: Diane Baronas-Lowell
Sent: Tuesday, September 09, 2014 4:48 PM
To: Janet Blanks
Cc: Rodney Murphey
Subject: Advanced Neurophysiology Lab (BSC6930), Practical Cell Neuroscience (BSC 6936), Human Neuroanatomy (BSC 6936), Neurophysiology (BSC 6936)

Dear Janet:

Hope all is well!

The Biology Department would like to have the following four courses formally recorded as new graduate courses:

1. BSC 6930 Advanced Neurophysiology Lab which has been offered twice (Spring 2012 and Spring 2013, by Ken Dawson-Scully and Bob Stackman).
2. BSC 6936 Practical Cell Neuroscience which has been offered each spring beginning in 2010 (by Ken Dawson-Scully).
3. BSC 6936 Human Neuroanatomy was offered in Summer 2014 and will be held

again in Spring 2015 (by Brenda Claiborne).

4. Ken has also recently developed an additional course titled Neurophysiology (BSC 6936) which is running during the current fall 2014 term.

In order to do so, I am filling out new graduate course proposal forms for each course and under the "Please consult and list departments that might be affected by the new course and attach comments" box, Rod Murphey suggested I include Center for Complex Systems. Charles Roberts instructed me to ask for an email from you stating that your center has no objections to these courses.

Please be so kind to send me an email with your comments. Thank you very much for your time!

Regards, Diane

Diane Baronas-Lowell, Ph.D.
Research Associate Professor
FAU-Neuroscience
Charles E. Schmidt College of Science
John D. MacArthur Campus
5353 Parkside Dr.
MC-19, RE Bldg., Room 107
Jupiter, FL 33458
561 799-8073 (work)
561 374-0469 (cell)



Charles E. Schmidt College of Medicine
777 Glades Road
Boca Raton, FL 33431
(561) 297-0706
Fax: (561) 297-2519

Monday, September 29th, 2014

To: Charles E. Schmidt College of Science
Biology Department

To Whom It May Concern,

The Biomedical Science Graduate Program in the Charles E. Schmidt College of Medicine has reviewed the new Biology course proposals, and does not have any objections to the proposed courses. The courses do not contain any material that could constitute a conflict with our program curriculum.

Sincerely,

A handwritten signature in cursive script that reads 'Marc Kantorow'.

Marc Kantorow, Ph.D.
Professor and Director of Graduate Programs
Charles E. Schmidt College of Medicine
Florida Atlantic University
777 Glades Rd.
Boca Raton, FL 33431
561-297-2910

In order to do so, I am filling out new course proposal forms and under the "Please consult and list departments that might be affected by the new course and attach comments" box, Dr. Randy Brooks, as Chair of our Departmental Graduate Program Committee, suggested I list the Biomedical Science Department. He instructed me to contact you and request email confirmation that your department has no objections to the proposed courses.

The new course proposals and associated syllabi are attached for your review and listed below. Courses marked with an asterisk below are courses which we are proposing to dual list at both the graduate and undergraduate levels. All other courses on the list are proposed only at either the graduate (G) or the undergraduate (UG) level at this time and all courses are labeled by level.

1. (G) Computer Graphics for Biologists (BSC 6466)
2. (G) Methods in Biotechnology (BSC 6468L)
3. *(G) Advanced Plant Biotechnology and Lab (BSC 5467C)
4. *(UG) Genetics Lab (BSC 4007L)
5. *(G) Advanced Genetics Lab (BSC 5038L)
6. *(UG) Molecular Genetics of Aging (BSC 4022)
7. *(G) Advanced Molecular Genetics of Aging (BSC 5029)
8. (UG) Life of a Scientist
9. (UG) Introduction to Honors I
10. (UG) Introduction to Honors II
11. (G) Practical Cell Neuroscience
12. (G) Human Neuroanatomy
13. (G) Neurophysiology
14. (G) Advanced Neurophysiology

The Advanced Plant Biotechnology and Lab, Methods in Biotechnology, and Practical Cell Neuroscience courses listed above already exist as undergraduate level courses in the catalog and, in these two cases, we are simply adding a graduate version of each of the existing courses. (Methods in Biotechnology is the graduate level equivalent to undergraduate level Biotechnology I and II Laboratory courses combined).

In perusing the university catalog, we were not able to identify any apparent direct course conflicts within your department but we would appreciate it if you would respond an email with your comments and the comments of any faculty within your department who teach related courses. Thank you very much for your time.

Regards, Michelle

Michelle Cavallo
Administrative Assistant & Graduate Coordinator
Department of Biological Sciences
Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431
PH: 561-297-0384