

SYLLABUS

Course Title: Cellular Neuroscience and Disease

Course and call number & credit hours: PCB 4842-001, 14405 3 credits

Term: Fall 2020

Class room location, days & Time: AD 103-Jupiter, Tuesday & Thursday 9:30-10:50 PM

Course type: Lecture, in class

Course Pre-requisites: Cell Biology PCB 3023/minimum grade B- or Genetics PCB 3063/Minimum grade b-

Instructor: Tanja A. Godenschwege, Ph.D.

Office: MC-19, 209 **e-mail:** godensch@fau.edu

Phone: 561-799-8055

Office Hours: Tuesday & Thursday 12:30 p.m. – 2:30 p.m.

Course description: Course covers cellular neuroscience with a focus on human neurological diseases and disorders. Lectures provide the basic knowledge about cellular and molecular neuroscience and link them to the pathology of neurological diseases and disorders.

Course Objectives: The objective it for the students to know and understand common cellular and molecular mechanisms, principles and pathways that are relevant to neuronal processes and neurological diseases.

Course format: Method of instruction: Lectures, classroom discussion, exercises and assignments.

Course evaluation method:

Participation and assignments: 10% of the final grade.

Exams: Best four out of 5 exams (each 20% of the final grade) given during the course period will count for a total of 80% of the finale grade.

Mini Talks: 10% of the final grade

Extra credit: Up to 5% of the final grade extra credit can be earned with in class assignments.

Grading Scale

Grade	Percentage	Grade	Percentage
A	≥ 90	C	≥ 60
A-	≥ 85	C-	≥ 55
B+	≥ 80	D+	≥ 50
B	≥ 75	D	≥ 45
B-	≥ 70	D-	≥ 40
C+	≥ 65	F	≤ 39

Policy on makeup tests, late work, and incompletes:

Missed Exams: At the end of the semester there will be an ***optional fifth cumulative final exam***, which will cover the entire material from the entire semester. The final exam can be used as a make-up exam for a missed exam or to improve the grade. ***No additional make-up exams will be offered!*** If your final exam score does not improve your grade, it will be ignored.

Incomplete Grade: Consistent with FAU policy, an incomplete grade will only be given to a student who fulfills ***all*** of the following criteria:

1. Misses the 2 exams, both due to an FAU approved emergency
2. Has a grade of C or better
3. Submits evidence of the emergency and signs an incomplete agreement

Classroom etiquette policy: University policy on the use of electronic devices states: “In order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions.”

Attendance Policy

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.

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/.

Credit Hour Policy: Excess Hours Surcharge

[Florida Statute 1009.286](#) defines “excess hours” as credit hours that exceed the completion requirements for a baccalaureate degree program at state universities. For students enrolling in a state university or a Florida State College System institution for the first time in or after the fall 2009 semester, a tuition rate surcharge will be applied for excess hours. The surcharge is assessed only on the tuition portion of the semester hour cost, not on the fees. The amount of the surcharge and the allowable “excess hours” are determined by the initial term of entry as indicated in the catalog. For the complete Policy see <http://www.fau.edu/academic/registrar/FAUcatalog/academics.php#excess>.

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/>

Religious Accommodations: Reasonable accommodation will be made for students participating in a religious observance but students must notify the instructor in advance of their intention to participate in religious observation and request an excused absence.

Code of Academic Integrity Policy Statement: 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. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 at http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf

Textbooks:

Required Textbook: Molecular Biology of the Cell, Sixth Edition

Alberts, B., Johnson, A., Lewis, J., Raff, M., Roberts, K., and Walter, P.
Garland Publishing, Inc. New York & London

Course topical outline: Preliminary Schedule. This schedule applies to all sections taught by this instructor and *is subject to change at any time by the instructor, depending on the needs of the class. Changes may be announced online via blackboard or verbally in class.*

Schedule	Date	Topics	Assignment/ homework
	Aug 21	Introduction and Syllabus	Read articles posted on Blackboard
	Aug 23	Neurons and Glia	Read articles posted on Blackboard, Chapter 1, 11, 19, *
	Aug 28	Action potential	Chapter 11, *
	Aug 30	Synaptic transmission	Chapter 11, 13*
	Sept 4	Synaptic integration	Chapter 11, 13*
	Sept 6	Class-Review-Quiz	
	Sept 11	Exam1	
	Sept 13	Models and techniques	Chapter 8, 9, Read articles posted on BB*
	Sept 18	Models and techniques	Chapter 8, 9*
	Sept 20	Signaling	Chapter 15, *
	Sept 25	Signaling	Chapter 15, 16, *
	Sept 27	Class-Review-Quiz	
	Oct 2	Exam2	
	Oct 4	Growth cone	Chapter 15, 16, 21, Read articles posted on BB*
	Oct 9	Guidance molecules	Chapter 15, 16, 21, Read articles posted on BB*
	Oct 11	Guidance molecules	Chapter 15, 16, 21, Read articles posted on BB*
	Oct 16	Regeneration, Dendrite and synapse development	Chapter 15, 16, 21, Read articles posted on BB*
	Oct 18	Class-Review-Quiz	
	Oct 23	Exam 3	
	Oct 25	Energy conversion & Oxidative stress	Chapter 14, Read articles posted on BB*
	Oct 30	Apoptosis	Chapter 18 Read articles posted on BB *
	Nov 1	Ubiquitin & Parkinson's	Chapter 6, 13 Read articles posted on BB *
	Nov 6	Plasmamembrane, lipid rafts and axonal transport	Chapter 10, 7 Read articles posted on BB *
	Nov 8	Alzheimer's, Amyloid precursor-like protein	Chapter 10, 7 Read articles posted on BB *
	Nov 13	Class-Review Quiz	
	Nov 15	Exam 4	Read articles posted on BB
	Nov 20	Mini Talks	Read articles posted on BB
	Nov 22	Thanksgiving	Read articles posted on BB

	Nov 27	Mini Talks	
	Nov 29	Mini Talks	
	Dec 4	Reading day	
	Dec 6	Exam 5-Finals	
			*= submit quiz questions

Provost Syllabus Guidelines

PCB
4842
pre req
change
only

1. Course title/ Prefix- Course-Section-CRN# for current term and number of credits

(Example: Biodiversity BSC 1010-001-34560-3credits)

2. Course prerequisites, co-requisites, and where course fits in program of study (if applicable)

In addition to listing prerequisites and co-requisites

NOTE: if the course meets a particular requirement, such as WAC

(with grade of "C" or higher), Intellectual Foundations Program, required course for entry to particular program of study, etc.

3. Course logistics (term, class location and time, if classroom based or notation if online)

4. Instructor contact information (name, office address, office hours--minimum 2hours per Course, phone, email)

5. TA contact information (if applicable) TA name, office address, office hours, contact telephone number, and email address

6. Course description:

(The course description should be consistent with the description found in the University Catalog)

7. Course objectives/student learning outcomes

(Provide the students an understanding of what they will be expected to learn as a result of successfully completing the course)

8. Course evaluation method

(Include a breakdown of the graded course components and their weight in

determining the overall course grade (e.g. Midterm exam--20%, Essay #1--15%, Attendance and Participation--10%, etc.).

Students are entitled to know how they are progressing in a course based on the individual grades received. If you

have a policy about how unexcused class absences will affect the final grade, clearly state your policy. Please note that the

University Provost, in order to identify and assist students at academic risk, requests that courses with freshmen have

graded assignments well before midterm. If applicable also note the minimum grade required to pass the course (if not a "D-").

9. Course grading scale

(Many faculty include in their syllabi some type of grading rubric: what constitutes "A" work in the course

or in particular assignments, "B" work, what constitutes a "Pass" or "Fail," etc. The equivalent letter grade in the course is the

decision of an individual faculty member. If a faculty member plans to exercise the option to use a unique grading scale or curve,

that needs to be stated in the syllabus.

10. Policy on makeup tests, late work, and incomplete (if applicable) and Religious accommodations

If you do not accept late work or apply penalties to late work, state so. Please note that students may not be penalized

for absences due to participation in University-approved activities, including athletic or scholastics teams, musical and

theatrical performances, and debate activities. Instructors must allow these students to make up missed work without

any reduction in the student's final course grade. Reasonable accommodation must also be made for students participating

in a religious observance. Also, note that grades of Incomplete ("I") are reserved for students who are passing a course but

have not completed all the required work because of exceptional circumstances. If your college has elaborated on this policy,

state so here.

Religious Accommodations: Students who wish to be excused from coursework, class activities or examinations **must notify the instructor in advance of their intention to participate** in religious observation and request an excused absence.

11. Special course requirements (if applicable)

State if any requirements are associated with the course, such as mandatory field trips or film viewings, special fees, or purchase of course-related materials.

_____ 12. **Classroom Etiquette Policy (if applicable)**

If you have a particular policy relating to student behavior in the class, such as relating to tardiness or on the use of electronic devices in the classroom, state so here. Recognizing the unique relationship between faculty and student and adhering to the principles of academic responsibility, any such policies must be reasonable, non-discriminatory and not impede the educational mission. If you have a policy on the use of recording devices, please include a statement here.

✓ _____ 13. **FAU Attendance Policy Statement:**

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_____ 15. **Counseling and Psychological Services (CAPS) Center**

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✓ _____ 17. **Required texts/readings**

_____ 18. **Supplementary/recommended readings (if applicable)**

✓ _____ 19. **Course topical outline, including dates for exams/quizzes, papers, completion of readings and ** Out of class assignments**

Include a breakdown of topics covered (generally, **by class day or by week**), deadlines for course assignments/requirements, and dates of exams and quizzes.

(SEE PROVOST POLICY AND PROCEDURES: FOR CREDIT HOUR REQUIRMENTS FOR OUT OF CLASS ASSIGNMENTS)