

Course Approval Form

For instructions see: http://registrar.gmu.edu/facultystaff/catalogrevisions/course/

Action Requested:			Course Lev	el:	
x Create new course	Inactivate existing course	Reinstate inactive course	Undergr	aduate	
Modify existing course (check a	II that apply)				
Title Credits	Repeat Status	Grade Type	x Graduat	e	
Prereq/coreq Sched	ule Type Restrictions				
Other.					
College/School: CoS		Department: Molecular	Neuroscience		
Submitted by: Kim Blackwell		Ext: 34381	Email: Kblac	kw1@gmu.edu	
Subject Code: Neur N	lumber: 592	Effective Term: Fall			
have a separate form.)	ch course proposal must	X Spring	Year 2	2015	
		Summe	71		
Title: Current		Fulfills Ma	son Core Req?	(undergrad only)	
Banner (30 characters max w/ space	s)	Current	y fulfills requireme	ent	
New Special Topics in	Neuroscience	Submiss	sion in progress		
(check one) Variable to	C Repeat Status:	x Repeatable within degree	(RD) Maximum	credits	
		Repeatable within term (R	T) allowed:	9	
Crede Meder V Bogulor (A. P. (mer (LEC)		dent Study (IND)	
(check one) Satisfactory/No	Credit (check one)		Seminal	r (SEM)	
Special (A, B C	, etc. +IP) LEC can include	Recitation (RCT)	Studio (sτυ) ΄	
	LAB OF RCT	Internship (INT)			
Prerequisite(s):	Corequisite(s):		Instruction	nal Mode:	
Neur 327, Neur 335 or permission	n of		x 100% fac	e-to-face	
instructor			Hybrid: ≤	50% electronically delivered	
			100% ele	ctronically delivered	
Postrictions Enforced by System Major College Degree Dragrom at Include Code Are there equivalent equivalent					
			If yes, please	list	
Catalog Copy for NEW Cours	ses Only (Consult University Ca	talog for models)			
Description (No more than 60 words, use verb phrases and present tense) Notes (List additional information for the course)					
Special topics in neuroscien	ice reflecting specialized				
areas or new subfields that a	are not covered in fixed-				
content neuroscience course	es. Course may be repeat	ed			
for credit as needed.					
Indicate number of contact hours:		ninar per week: 3	Hours of Lab or	r Studio:	
when Ohered. (check an that apply)					
Approval Signaturos					
Approven orginatures					
King & Rinskurd					
Jyms Comercian - V	12/01/14	O alla sua /O alta alta alta			
Department Approval	Date	College/School Approval		Date	
If this course includes subject matter currently dealt with by any other units, the originating department must circulate this proposal for review by					
Linit Name	signatures prior to submission. Fai	Linit Approver's Signature	unis proposal.	Date	
		Sint Approver 5 Signature	,	Duit	

For Graduate Courses Only

For Registrar Office's Use Only: Banner___

Catalog

Course Proposal Submitted to the College of Science Curriculum Committee (COSCC)

revised 10/16/14

The form above is processed by the Office of the University Registrar. This second page is for the COSCC's reference. Please complete the applicable portions of this page to clearly communicate what the form above is requesting.

FOR ALL COURSES (required)

Course Number and Title: Neur 592 Special Topics in Neuroscience

Date of Departmental Approval: Dec 5, 2014

FOR INACTIVATED/REINSTATED COURSES (required if inactivating/reinstating a course)

• Reason for Inactivating/Reinstating:

FOR MODIFIED COURSES (required if modifying a course)

- Summary of the Modification:
- Text before Modification (title, repeat status, catalog description, etc.):
- Text after Modification (title, repeat status, catalog description, etc.):
- Reason for the Modification:

FOR NEW COURSES (required if creating a new course)

- Reason for the New Course: To provide students with an opportunity to cover special topics in the field of neuroscience at a basic or fundamental level. This also provides an opportunity for advanced undergraduates to take introductory level graduate courses. The course (1) prepares the student to undertake graduate research in neuroscience and related areas, (2) prepares the student to participate in professional activities in this field of study, (3) broadens the student's background in the general field of neuroscience, and (4) prepares the student to explore interdisciplinary applications and collaborative research in neuroscience.
- Relationship to Existing Programs: The proposed course will support both the graduate and undergraduate Neuroscience programs. Some graduate students in the Biology M.S., or Psychology M.A. and Ph.D. programs with neuroscience concentration also will find the course beneficial. The proposed course will provide essential content to students in those degree programs with an academic focus on Neuroscience. This type of integration between the biological sciences and psychology is directly relevant to the degree requirements for these programs.
- Relationship to Existing Courses: This course complements the Neur 689 Topics in Neuroscience by allowing special topics to be taught at a more basic level.
- Semester of Initial Offering: Fall 2015
- Proposed Instructors: Nadine Kabbani
- Insert Tentative Syllabus Below

SYLLABUS

Lecture	Date	ΤΟΡΙϹ	READING	
1	08/27	Introduction; Subcellular organization and Organelles (Guest lecturer)	Kandel Chap 4 pp 71-87; LK Chap 1, 2	
2	09/03	Finish Organelles; Glia; Neuronal Morphology	Kandel Chap 2 pp22-27; Chap 4 pp 88-97	
3	09/10	Resting potential, Ion pumps, Electrotonic properties	pumps, Electrotonic Kandel Chap 6; LK Chap 3	
4	09/17	Ionic Channels	Kandel Chap 5, LK Chap 4,5	
5	09/24	Action Potentials	Kandel Chap 7, LK Chapter 6	
6	10/01	Overview of synaptic transmission; Gap junctions	Kandel Chap 8-9 p 205	
	10/08	Midterm	Lectures 1-5	
7	10/15	Ionotropic Receptors, Postsynaptic potentials	Kandel Chap 9 p 205- Chap 10; LK Chap 8, 11	
8	10/22	Transmitter release	Kandel Chap12; LK Chap 9	
9	10/29	Synthesis of Classical Neurotransmitters	Kandel Chap 13 pp 289-297; LK Chap 8, 10	
10	11/05	Non classical neurotransmitters; Regulation of Gene expression	Kandel pp 247-250; 297-304; 1469-1472	
11	11/12 9:15 am start	Metabotropic receptors and Signaling pathways (Guest lecturer)	Kandel Chap 11; LK Chap 12, 13	
	11/19	Synaptic Plasticity		
	11/26	Thanksgiving		
12	12/03	Sensory receptors	Kandel pp 458-464,713- 716,726-732,656-671	
	12/10	Final 10:30 am - 1:15 pm or 9:00 - 11:45 am	Lectures 6-12	