Course Approval Form

For approval of new courses and deletions or modifications to an existing course.

registrar.gmu.edu/facultystaff/curriculum

Action Requested:

- [X] Create new course
- [ ] Inactivate existing course
- [ ] Modify existing course (check all that apply)
  - [ ] Title
  - [ ] Credits
  - [ ] Repeat Status
  - [ ] Grade Type
  - [ ] Prereq/coreq
  - [ ] Schedule Type
  - [ ] Restrictions
  - [ ] Other:

Course Level:

- [ ] Undergraduate
- [X] Graduate

College/School: College of Science
Department: Molecular Neuroscience
Submitted by: Kim Blackwell
Ext: 34381 **Email:** Kblackw1@gmu.edu

Subject Code: Neur **Number:** 651
(Do not list multiple codes or numbers. Each course proposal must have a separate form.)

Effective Term:

- [ ] Fall
- [x] Spring
- [ ] Summer

Year 2015

Title:
Current
Banner (30 characters max including spaces)
New: Molecular Neuropharmacology

Credits: (check one)

- [x] Fixed: 3 or
- [ ] Variable: to

Repeat Status: (check one)

- [x] Not Repeatable (NR)
- [ ] Repeatable within degree (RD)
- [ ] Repeatable within term (RT)

Maximum credits allowed:

Grade Mode: (check one)

- [x] Regular (A, B, C, etc.)
- [ ] Satisfactory/No Credit
- [ ] Special (A, B C, etc. +IP)

Schedule Type: (check one) LEC can include LAB or RCT

- [x] Lecture (LEC)
- [ ] Lab (LAB)
- [ ] Recitation (RCT)
- [ ] Internship (INT)
- [ ] Independent Study (IND)
- [ ] Seminar (SEM)
- [ ] Studio (STU)

Prerequisite(s):
NEUR 602 or permission of instructor

Corequisite(s):

Instructional Mode:

- [x] 100% face-to-face
- [ ] Hybrid: ≤ 50% electronically delivered
- [ ] 100% electronically delivered

Restrictions Enforced by System: Major, College, Degree, Program, etc. Include Code.

Are there equivalent course(s)?

- [ ] Yes
- [x] No

If yes, please list

Catalog Copy for NEW Courses Only (Consult University Catalog for models)

Description (No more than 60 words, use verb phrases and present tense)	**Notes** (List additional information for the course)
Presents key concepts in cellular and molecular neuropharmacology Provides an in-depth survey of receptor driven cell function, which includes recent topics in cell structure, membrane function, electrical properties of neurons, and intracellular signaling. Enables an introduction to research tools and trends in study of neuronal systems via a reading and an analysis of the primary literature.	

Indicate number of contact hours: Hours of Lecture or Seminar per week: 3 Hours of Lab or Studio:

When Offered: (check all that apply) [ ] Fall [ ] Summer [x] Spring

Approval Signatures

Kim L. Blackwell — 10/17/14

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 those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

For Graduate Courses Only

Graduate Council Member — Provost Office — Graduate Council Approval Date

For Registrar Office's Use Only: Banner_____Catalog_____

revised 11/8/11

NEUR 651: Molecular Neuropharmacology

INSTRUCTOR: Nadine Kabbani, Ph.D.
Contact Information: nkabbani@gmu.edu, 3-4406, Krasnow Institute, Rooms 233
Office Hours: W, 12–3:00 pm, or by appointment

Overview: This is a core graduate neuroscience course that presents key concepts in cellular and molecular neuropharmacology. It provides an in-depth survey of receptor driven cell function, which includes recent topics in cell structure, membrane function, electrical properties of neurons, and intracellular signaling. The course also enables an introduction to research tools and trends in study of neuronal systems via a reading and an analysis of the primary literature.

Required Textbook: **Molecular Neuropharmacology**: A Foundation for Clinical Neuroscience (Second Edition). Eric Nestler, Steven Hyman, Robert Malenka

Class structure and grading: The class will be divided into 2 parts: A 1.5 hour lecture followed by a 1.5 hour presentation and discussion on a primary research article in a journal club like fashion. There will be 2 exams, and each will count for 40% of the final grade. The remaining 20% is based on participation and presentation of the research article.

Date	**Lecture Title**	**Chapter**
Jan 22	Fundamentals of Neuropharmacology	Ch. 1
Jan 29	Cellular Basis of Communication	Ch. 2
Feb 5	Synaptic Transmission	Ch.3
Feb 12	Signal Transduction in the Brain	Ch.4
Feb 19	Excitatory and Inhibitory Amino Acids	Ch. 5
Feb 26	Widely Projecting Systems: Monoamines and Acetylcholine	Ch. 6
Mar 5	Neuropeptides	Ch. 7
Mar 12	**Spring Break**	
Mar 19	**Exam 1**	**Ch. 1-7**
Mar 26	Neural and neuroendocrine control of the internal milieu	Ch. 10
Apr 2	Higher cognitive function and behavioral control	Ch. 13
Apr 9	Mood and emotion	Ch. 14
Apr 16	Reinforcement and addictive disorders	Ch. 15
Apr 23	Schizophrenia and other psychoses	Ch. 16
Apr 30	Neurodegeneration	Ch. 17
May 9	**Exam 2**	**Ch. 10-17**