

## Nikou, Roshan

---

**From:** Graduate.Council.Web.Site@www.uky.edu  
**Sent:** Monday, November 13, 2006 4:56 PM  
**To:** Nikou, Roshan  
**Cc:** Price, Cleo  
**Subject:** Investigator Report

AnyForm User: www.uky.edu  
AnyForm Document: <http://www.rgs.uky.edu/gs/GCInvestigatorReport.html>  
AnyForm Server: www.uky.edu (/www/htdocs/AnyFormTurbo/AnyForm.php)

College/Department/Unit: = PHA 622

Category: = New

Date\_for\_Council\_Review: = Nov 16

Recommendation\_is: = Approve

Investigator: = W. W. Witt

E-mail\_Address = wwitt@uky.edu

1 Modifications: =

2 Considerations: =

3 Contacts: =

4 Additional Information: = This new course will allow graduate students to receive the most recent and detailed information on Molecular Drug Targets and Therapeutics. Currently, graduate students in Molecular and Biomedical Pharmacology currently share a course (PHA 522 and OBI 826) with third year Dental students. This new course will allow graduate students to have more detailed information provided to them; Dental students will now receive information tailored for them.

Overall, PHA 622 has a variable credit of 1 to 4. PHA 622 will have four sections, each worth one credit. Each section is a 'stand alone' unit and students may take any combination of sections from one to all four. The Registrar's office was consulted about this matter and this arrangement is allowed if the Course is for variable credit.

The Course Description, Course Outcomes, Instructors, Examinations & Grading Policy, Course Schedule, and Exam Schedules are clearly written and explained.

I recommend approval of this new course.

--

AnyForm/PHP3 0.1

AnyFormRandomSeqNo: 63748311

## APPLICATION FOR NEW COURSE

1. Submitted by College of Medicine Date July 31, 2006  
 Department/Division offering course Molecular and Biomedical Pharmacology
2. Proposed designation and Bulletin description of this course
- a. Prefix and Number See Attached b. Title\* Molecular Drug Targets and Therapeutics  
 \*NOTE: If the title is longer than 24 characters (including spaces), write  
 A sensible title (not exceeding 24 characters) for use on transcripts \_\_\_\_\_
- c. Lecture/Discussion hours per week 4 d. Laboratory hours per week \_\_\_\_\_  
 e. Studio hours per week \_\_\_\_\_ f. Credits (Variable) 1-4
- g. Course description  
See Attached
- h. Prerequisites (if any)  
IBS 601-609 & PHA 621
- i. May be repeated to a maximum of 4 (if applicable)
4. To be cross-listed as
- |  |                        |  |   |
|--|------------------------|--|---|
|  | Prefix and Number      |  | Signature, Chairman, cross-listing department |
|  | <u>January 1, 2007</u> |  |   |
5. Effective Date \_\_\_\_\_ (semester and year)
6. Course to be offered  Fall  Spring  Summer
7. Will the course be offered each year?  
 (Explain if not annually)  Yes  No
8. Why is this course needed?  
See Attached
9. a. By whom will the course be taught? The Faculty of the Dept. of Molecular & Biomedical  
 Pharmacology/COM  
 b. Are facilities for teaching the course now available?  Yes  No  
 If not, what plans have been made for providing them?

## APPLICATION FOR NEW COURSE

10. What enrollment may be reasonably anticipated? 10-15 Students

11. Will this course serve students in the Department primarily?  Yes  No

Will it be of service to a significant number of students outside the Department?  
If so, explain.  Yes  No

See Attached

---

Will the course serve as a University Studies Program course?  Yes  No

If yes, under what Area? \_\_\_\_\_

12. Check the category most applicable to this course

traditional; offered in corresponding departments elsewhere;

relatively new, now being widely established

not yet to be found in many (or any) other universities

13. Is this course applicable to the requirements for at least one degree or certificate at the University of Kentucky?  Yes  No

14. Is this course part of a proposed new program:  Yes  No  
If yes, which?

15. Will adding this course change the degree requirements in one or more programs?  Yes  No  
If yes, explain the change(s) below (NOTE – If “yes,” a program change form must also be submitted.)

---

16. Attach a list of the major teaching objectives of the proposed course and outline and/or reference list to be used.

18. If the course is 400G or 500 level, include syllabi or course statement showing differentiation for undergraduate and graduate students in assignments, grading criteria, and grading scales.  Check here if 400G-500.

19. Within the Department, who should be contacted for further information about the proposed course?

Name Dr. Michael T. Piascik  
mtp@uky.edu

Phone Extension (859) 323-5107

APPLICATION FOR NEW COURSE

Signatures of Approval:

7/31/06 Michael Pascoe  
Date of Approval by Department Faculty

*[Signature]* (Vice-Chair)  
Reported by Department Chair

*[Signature]* 8-17-06  
Reported by College Dean

*[Signature]* 08/15/06  
Reported by Undergraduate Council Chair  
Faculty

Reported by Graduate Council Chair

*[Signature]*  
Reported by HCCC Chair

Reported by Senate Council Office

Reported by Senate Council Office

Date of Approval by College Faculty  
*[Signature]* 8-8-06

CURRICULUM \*Date of Approval by Undergraduate Council

*[Signature]* 11/17/06  
\*Date of Approval by Graduate Council

10/18/06  
\*Date of Approval by Health Care Colleges Council (HCCC)

*[Signature]*  
\*Date of Approval by Senate Council

\*Date of Approval by University Senate

\*If applicable, as provided by the Rules of the University Senate

Application form  
# 2 Proposed Designation

PHA 622 section 001-Cardiovascular Pharmacology  
PHA 622 section 002-Neuropharmacology  
PHA 622 section 003 Chemotherapeutic Agents  
PHA 622 section 004 Autocoids and Endocrine Pharmacology and Toxicology

# 3 Course description

PHA 622 is an advanced course designed to provide graduate students with state of the art information regarding drugs, drug action and targets for drug action. Emphasis will be placed on drugs that interact with the cardiovascular system (PHA 622 section 001), the central nervous system (PHA 622 section 002), chemotherapeutic agents, (PHA 622 section 003) and other important drugs classes such as nonsteroidal anti-inflammatory agents, steroid hormones, antidiabetic agents and toxicology (PHA 622 section 004). Each section is designed to be a separate one hour course. Students may take any combination of sections from one to all four sections. For each agent, emphasis will be placed on the cellular mechanisms of action, the receptors or cellular targets at which they act, therapeutic uses and potential toxicities. This information is intended to be integrated with other disciplines, including anatomy, biochemistry, physiology, psychology and molecular biology.

#8 Why is the course needed?

PHA 622 will replace PHA 522. This change is necessary to provide the most appropriate teaching experience for all students taught by the Department of Pharmacology and is a component of a larger reorganization of Departmental teaching efforts. Currently, PHA 522 is taught together with OBI 826, Dental Pharmacology. OBI 826 is a course for third year dental students. In this less than optimal arrangement graduate and dental students are taught together. This necessarily means that drug information most appropriate for dental practitioners is presented along with information most appropriate for Ph.D. students. Therefore, to rectify this situation the Department has developed PHA 622, a course designed strictly for advanced graduate students. A second aspect of this curricular reform is the modification of OBI 826 to contain material specifically tailored for dentists. This new dental course is OBI 836. In PHA 622 the fundamental principles of drug action will be presented at a sophisticated mechanistic and cellular level. Thus the student will learn the molecular targets for relevant drugs as well as the cellular signaling pathways engaged and the resulting outputs that result in the therapeutic efficacy of these agents. Potential toxicities of drugs will also be a component of PHA 622. The course is offered in four sections. Graduate students from other Departments in the College of Medicine, especially Physiology and Toxicology or other Colleges such as Pharmacy will also find this course relevant to their training programs. Completion of all four sections of PHA 622 will offer a comprehensive exploration of drugs and drug action.

However, each section is designed to be a free standing course on a discrete classification of drugs. Offering this modular course design, allow students to take any number of the four sections as is appropriate to achieve their educational objectives.

#11

Graduate students in other departments of the College of Medicine, from the College of Medicine or from Biological Sciences will find that PHA 622 provides highly relevant information that will complement their current training programs.

## **Response from University Registrar's Office Regarding Varying Credit Hours in a Course**

You can build more than one section of a course, with each section having different credit hours as long as the course is approved as variable credit overall. For example PIIA 622 is approved for 1 -4 credit hours. You can build section 001 for one credit hour and it can have one sub-title that would be different from section 002 which might be for 2 credit hours and a different subtitle. You can restrict enrollment in each section as well. Section three could be for 4 credit hours or, if you chose to do so, and are offering only one section for a term it can be for anywhere from 1 to 4 credits. I hope this helps clear it up for you. If not, please let me know. Thanks!

Jacquie Hager

## **PHA 622 MOLECULAR DRUG TARGETS AND THERAPEUTICS**

PHA 622 section 001-Cardiovascular Pharmacology

PHA 622 section 002-Neuropharmacology

PHA 622 section 003 Chemotherapeutic Agents

PHA 622 section 004 Autocoids and Endocrine Pharmacology and Toxicology

### **COURSE DESCRIPTION**

Pharmacology is the study of the effects of drugs on biologic systems. A drug is a chemical that has the ability to interact with and cause a change in a biologic system. Drugs are used in such diverse situations as the topical application of drugs to treat acne, the therapy of hypertension, the systemic use of drugs to treat cancer or in support of organ transplantation. It is thus not surprising to realize that there are 54,000 drug products on the market containing about 2,000 active ingredients. Since 1940 over 1,000 new chemical entities have been introduced as drugs. Toxic substances and environmental pollutants are also considered drugs. Therefore, understanding how these agents affect physiologic systems is also highly relevant. PHA 622 is an advanced course designed to provide graduate students with state of the art information regarding drugs, drug action and targets for drug action. Emphasis will be placed on drugs that interact with the cardiovascular system (PHA 622 section 001), the central nervous system (PHA 622 section 002), chemotherapeutic agents, PHA 622 section 003) and other important drugs classes such as nonsteroidal anti-inflammatory agents, steroid hormones, antidiabetic agents and toxicology (PHA 622 section 004). Each section is designed to be a separate one hour course. Students may take all sections, one section, or more than one section. For each agent, emphasis will be placed on the cellular mechanisms of action, the receptors or cellular targets at which they act, therapeutic uses and potential toxicities. This information is intended to be integrated with other disciplines, including anatomy, biochemistry, physiology, psychology and molecular biology. Several new drugs are introduced into therapy each year. We will use the Blackboard website as a means to effectively communicate.

**COURSE OUTCOMES;** Students shall achieve the following outcomes

Know the key drug classes used in cardiovascular therapeutics, disorders involving the central nervous system, as chemotherapeutic agents and other relevant disease states such as asthma and diabetes.

Know the receptors at which key drugs act to produce their pharmacologic actions.

Understand the cellular mechanisms of actions of key drugs including the signaling pathways engaged by the drugs to produce their effects.

Know the targets at which drugs act to produce toxicologic outcomes as well as the cellular mechanisms by which these effects occur.



Know the therapeutic uses of key drugs and understand the rationale for their uses in treating pathophysiologic conditions

## **FACULTY**

### **Course Coordinator**

Michael T. Piascik, Ph.D.,  
mtp@pop.uky.edu

Office: BHSRB 150

phone: 323-5107

### **Teaching Faculty**

Eric Blalock, PhD  
emblal@uky.edu

Office: MS-323B UKMC

phone: 323-8033

Rolf Craven, PhD  
rolf.craven@uky.edu

Office: 213 Combs

phone: 323-3832

Robert Hadley, PhD  
rhadley@uky.edu

Office: MS-371 UKMC

phone 257-6556

David Kaetzel, PhD  
dmkaetz@uky.edu

Office: MN-350 UKMC

phone 257-6558

Michael Kilgore, PhD  
mwkilg0@uky.edu

Office: MN-354 UKMC

phone: 323-1821

Susan Kraner, PhD  
sdkran2@uky.edu

Office: MS-313 UKMC

phone: 323-1996

Rina Plattner, PhD  
rplat2@uky.edu

Office: 209 Combs

phone: 323-4778

Nada Porter, PhD  
nadap@uky.edu

Office: MS-315 UKMC

phone 257-4715

Steven Post, PhD  
spost@uky.edu

Office:: CTW 509

phone: 323-4933 ext 81363

Hollie Swanson, PhD  
hswan@uky.edu

Office: MS-372 UKMC

phone: 323-1463

Olivier Thibault, PhD  
othibau@uky.edu

Office: MS-320 UKMC

phone: 323-4863

## **Class Meetings**

PHA 622 will meet Mon., Tues., Thurs., and Fri. at 1 pm in MN 305.

## **Attendance Policy**

Regular class attendance is critical to success in this course. Students are expected to arrive on time for all scheduled activities. Tardiness is an inconvenience to classmates and instructors. Four unexcused absences will be allowed during the semester before a letter grade reduction is employed.

## **Examinations and Grading Policy**

The grade for each section of PHA 622 will be determined by an examination given at the end of the section. Questions will consist of extended matching, short answer and essay type questions. The final numeric grade will be the average of grades on all four examinations. Letter grades will be given for the following numeric scores:

A = 100-90

B = 89.5-80

C = 79.5-70

E (Fail) = Below 69.5

I = Incomplete

The examinations will be given only on the assigned day and time. Permission from the course director is required for the student to miss an exam. Rescheduling an exam and its format are at the discretion of the Course Director. Please plan your travel so as to be present for all exams. Personal travel, will not be accepted as a reason for missing the final. Answers to examinations will be posted upon conclusion of the exam and grading. If you feel that a question was graded incorrectly, this should be communicated in writing to the instructor authoring the question. This communication must be signed to be considered. Revisions to grades must be approved by the Course Director. Decisions regarding all changes in grading must be made within two weeks of the return of the examination and will be final.

## **Academic Dishonesty**

Hopefully, cheating and plagiarism will not be an issue in this course. In many cases, students who contemplate committing breaches of academic integrity are unaware of the seriousness with which the University views the offenses or of the potential consequences. According to rules adopted by the University Senate (Senate Rules 6.4.0 academic offenses policy), the minimum punishment for either of these offenses is a grade of 0 (zero, no credit) for the assignment in question. Additional punishments may be added if there are repeated instances of breaches of academic integrity as delineated in the Senate Rules noted above.

**Classroom Behavior**

Behavior which detracts from the educational environment will not be tolerated. Professional behavior is expected. This is defined as: treating the instructors and your fellow students in a respectful and courteous manner. Instructors and students alike are entitled to professional respect from one another regardless of the similarity or divergence of viewpoint and irrespective of age or experience. Disruptive students will be asked to leave the classroom and may receive a penalty to their final grade in the course

**PHA 622 MOLECULAR DRUG TARGETS AND THERAPEUTICS  
SPRING 2007**

**PHA 622 SECTION 001: CARDIOVASCULAR PHARMACOLOGY**

**PHA 622 SECTION 002: NEUROPHARMACOLOGY**

**PHA 622 SECTION 003: CHEMOTHERAPEUTIC AGENTS**

**PHA 622 SECTION 004: AUTOCOIDS, ENDOCRINE PHARMACOLOGY AND TOXICOLOGY**

Room#	Day	Date	Time	Topic	Instructor
MN-	Thr	01/11/07		Introduction to PHA 622 and the Autonomic Nervous System	Piasecik/ Thibault
MN-	Fri	01/12/07		The Autonomic Nervous System	Thibault
	Mon	01/15/07		<b>M. L. KING HOLIDAY – NO CLASS</b>	
MN-	Tue	01/16/07		Receptor Regulation and Cardiovascular Function	Piasecik
MN-	Thr	01/18/07		Receptor Regulation and Cardiovascular Function	Piasecik
MN-	Fri	01/19/07		Vascular Drug Targets	Piasecik
MN-	Mon	01/22/07		Hypertension	Piasecik
MN-	Tue	01/23/07		Hypertension	Piasecik
MN-	Thr	01/25/07		Ischemic Heart Disease	Hadley
MN-	Fri	01/26/07		Heart Failure and Cardiac Hypertrophy	Hadley
MN-	Mon	01/29/07		Heart Failure and Cardiac Hypertrophy	Hadley
MN-	Tue	01/30/07		Arrhythmogenesis and Antiarrhythmic Drugs	Hadley
MN-	Thr	02/01/07		Arrhythmogenesis and Antiarrhythmic Drugs	Hadley
MN-	Fri	02/02/07		The Pathophysiology of Atherosclerosis	Post
MN-	Mon	02/05/07		The Pathophysiology of Atherosclerosis	Post
MN-	Tue	02/06/07		<b>EXAM PHA 622 SECTION 001</b>	Staff
MN-	Thr	02/08/07		<b>PHA 622 Section 002 Neuropharmacology</b> Sedative-Hypnotics and Anti-anxiety Drugs	Porter
MN-	Fri	02/09/07		Sedative-Hypnotics and Anti-anxiety Drugs	Porter
MN-	Mon	02/12/07		Antiepileptics	Blalock
MN-	Tue	02/13/07		Neurodegenerative Conditions	Blalock
MN-	Thr	02/15/07		Mood Stabilization and Antidepressants	Porter
MN-	Fri	02/16/07		Opioid Analgesics	Blalock

MN-	Mon	02/19/07		Opioid Analgesics	Blalock
MN-	Tue	02/20/07		Drugs of Abuse	Norris
MN-	Thr	02/22/07		Drugs of Abuse	Norris
MN-	Fri	02/23/07		Local Anesthetics	Hadley
MN-	Mon	02/26/07		General Anesthetics	Hadley
MN-	Tue	02/27/07		Anti-psychotics	Norris
MN-	Thr	03/01/07		Novel Therapeutic Approaches	Thibault
MN-	Fri	03/02/07		<b>EXAM 2 PHA 622 SECTION 002</b>	Staff
MN-	Mon	03/05/07		<b>PHA 622 Section 002 Chemotherapeutic Agents</b> Cancer Chemotherapy	Craven
MN-	Tue	03/06/07		Experimental Cancer Therapeutics	Plattner
MN-	Thr	03/08/07		Experimental Cancer Therapeutics	Craven
MN-	Fri	03/09/07		Experimental Cancer Therapeutics	Kaetzel
				<b>SPRING BREAK MARCH 12-17, 2007</b>	
MN-	Mon	03/19/07		Sex Hormones	Kilgore
MN-	Tue	03/20/07		Nuclear Receptors	Kilgore
MN-	Thr	03/22/07		Adrenal Steroids	Swanson
MN-	Fri	03/23/07		Antivirals	Kaetzel
MN-	Mon	03/26/07		Antibiotics	Kraner
MN-	Tue	03/27/07		Antibiotics	Kraner
MN-	Thr	03/29/07		Tuberculosis	Craven
MN-	Fri	03/30/07		Antifungals	Kaetzel
MN-	Mon	04/02/07		Antiparasitics	Kilgore
MN-	Tue	04/03/07		Vaccine Development	Faculty
MN-	Thr	04/05/07		<b>EXAM 3 PHA 622 SECTION 003</b>	Staff
MN-	Fri	04/06/07		<b>PHA 622 Section 003 Autocoids, Endocrine Pharmacology and Toxicology</b> Non-steroidal Anti-inflammatory Agents	Kilgore
MN-	Mon	04/09/07		Aspirin-Acetaminophen-Anti Gout	Kilgore
MN-	Tue	04/10/07		Migraine	Blalock
MN-	Thr	04/12/07		Immunosuppressants	Norris

MN-	Fri	04/13/07		Gastrointestinal Pharmacology	Craven
MN-	Mon	04/16/07		Pulmonary Pharmacology	Plattner
MN-	Tue	04/17/07		Pituitary/Thyroid Drugs	Plattner
MN-	Thr	04/19/07		Anti-diabetic Drugs	Porter
MN-	Fri	04/20/07		Contraceptives/Hormone Replacement	Porter
MN-	Mon	04/23/07		Osteoperosis	Hadley
MN-	Tue	04/24/07		Principles of Toxicology	Swanson
MN-	Thr	04/26/07		Common Toxins	Swanson
MN-	Fri	04/27/07		TBA	Staff
MN-				<b>EXAM 4 PHA 622 SECTION 004</b> <b>FINAL EXAM WEEK (04/30-05/04/07)</b> <b>GRADES DUE 05/07/07</b>	