

## MEMORANDUM

TO: Dr. James Holsinger, Jr.  
Chair, Academic Council for the Medical Center

FROM: Sharon R. Stewart, Ed.D.  
Acting Associate Dean, College of Health Sciences

TOPIC: Application for a New Course: RHB 712 – Pharmacology in Rehabilitation

DATE: November 4, 2002

The College of Health Sciences has approved and recommends for your approval the following proposed new course:

### **RHB 712: Pharmacology in Rehabilitation ( 2-3 hr. variable credit)**

**Course Description:** This course will provide the basic science background necessary to understand the effects of medications on patients treated in the rehabilitation setting and their influence on treatment. Topics will include mechanisms of drug action, side effects, and how age and disease alter those mechanisms. The course will also address newly developing drug treatment strategies, including those in clinical trials. Students may either take the course for two credits or complete an additional advanced project for 3 credits, as outlined in the syllabus. The advanced project will enable the more interested student to pursue a topic in greater depth.

**Prerequisites:** Admission to the Rehabilitation Sciences Doctoral Program or consent of instructor.

**Effective Date:** Fall 2003; to be offered on alternating years

**Rationale for new course:** This course will contribute to the academic and research mission of the new Rehabilitation Sciences Doctoral program in the College of Health Sciences. Medications can have profound effects on patients undergoing rehabilitation. This course will provide the basic science background necessary to understand the effects of drugs on rehabilitation, preparing doctorally trained individuals to serve as educators, researchers, and/or as advanced clinicians. No other pharmacology course offered at UK specifically addresses this topic in detail. Available pharmacology courses are either more general with a broader scope or are advanced beyond our program needs.

**Contact person:** Susan A. Queen, PhD, PT  
323-1100

## MEMORANDUM

TO: Deans, Department Chairs, and Members of the Senate

FROM: Sharon R. Stewart, Ed.D.  
Acting Associate Dean, College of Health Sciences

TOPIC: Application for a New Course: RHB 712 – Pharmacology in Rehabilitation

DATE: November 4, 2002

The College of Health Sciences has approved and recommends for your approval the following proposed new course:

### **RHB 712: Pharmacology in Rehabilitation ( 2-3 hr. variable credit)**

**Course Description:** This course will provide the basic science background necessary to understand the effects of medications on patients treated in the rehabilitation setting and their influence on treatment. Topics will include mechanisms of drug action, side effects, and how age and disease alter those mechanisms. The course will also address newly developing drug treatment strategies, including those in clinical trials. Students may either take the course for two credits or complete an additional advanced project for 3 credits, as outlined in the syllabus. The advanced project will enable the more interested student to pursue a topic in greater depth.

**Prerequisites:** Admission to the Rehabilitation Sciences Doctoral Program or consent of instructor.

**Effective Date:** Fall 2003; to be offered on alternating years

**Rationale for new course:** This course will contribute to the academic and research mission of the new Rehabilitation Sciences Doctoral program in the College of Health Sciences. Medications can have profound effects on patients undergoing rehabilitation. This course will provide the basic science background necessary to understand the effects of drugs on rehabilitation, preparing doctorally trained individuals to serve as educators, researchers, and/or as advanced clinicians. No other pharmacology course offered at UK specifically addresses this topic in detail. Available pharmacology courses are either more general with a broader scope or are advanced beyond our program needs.

**Contact person:** Susan A. Queen, PhD, PT  
323-1100

**UNIVERSITY OF KENTUCKY  
APPLICATION FOR NEW COURSE**

1. Submitted by Health Sciences Date 9-26-02  
College of \_\_\_\_\_

Department/Division Rehabilitation Sciences/Rehabilitation Sciences Doctoral Program  
offering course \_\_\_\_\_

2. Proposed designation and Bulletin description of this course

a. Prefix and Number 712 b. Title Pharmacology in Rehabilitation  
\* \_\_\_\_\_

\*NOTE: If the title is longer than 24 characters  
(including spaces), write  
A sensible title (not exceeding 24 characters) for use Pharmacol in Rehab  
on transcripts \_\_\_\_\_

c. Lecture/Discussion hours per week 2 d. Laboratory hours 0  
per week \_\_\_\_\_ . per week \_\_\_\_\_

e. Studio hours per week 0 f. Credits 2-3 variable  
\_\_\_\_\_ credit \_\_\_\_\_

g. Course description

This course will provide the basic science background necessary to understand the effects of medications on patients treated in the rehabilitation setting and their influence on treatment. Topics will include mechanisms of drug action, side effects, and how age and disease alter those mechanisms. The course will also address newly developing drug treatment strategies, including those in clinical trials. Students may either take the course for two credits or complete an additional advanced project for 3 credits, as outlined in the syllabus. The advanced project will enable the more interested student to pursue a topic in greater depth.

h. Prerequisites (if any)  
Admission to the Rehabilitation Sciences Doctoral Program or consent of instructor.

i. May be repeated to a maximum of NA (if applicable)  
\_\_\_\_\_

4. To be cross-listed as NA  
Prefix and Number \_\_\_\_\_ Signature, Chairman, cross-listing department \_\_\_\_\_

5. Effective Date Fall, 2003 (semester and year)  
\_\_\_\_\_

6. Course to be offered  Fall  Spring  Summer

7. Will the course be offered each year?  Yes  No  
s

(Explain if not annually)

Because of the number of students enrolled in the Rehabilitation Sciences PhD program, this course will be offered only once every other year, giving all students in the program an opportunity to take the course. Presentation will alternate with other Doctoral level courses.

---

8. Why is this course needed?

This course will contribute to the academic and research mission of the new Rehabilitation Sciences PhD program in the College of Health Sciences. Medications can have profound effects on patients undergoing rehabilitation. This course will provide the basic science background necessary to understand the effects of drugs on rehabilitation, preparing doctorally trained individuals to serve as educators, researchers, and/or as advanced clinicians. No other pharmacology course offered at the University of Kentucky specifically addresses this topic in detail. Available pharmacology courses are either more general with a broader scope, or advanced beyond our program needs.

---

9. a. By whom will the course be taught? Susan A. Queen, PhD, PT

---

b. Are facilities for teaching the course now available?  Yes  No  
s

If not, what plans have been made for providing them?

---

---

**UNIVERSITY OF KENTUCKY  
APPLICATION FOR NEW COURSE**

10. What enrollment may be reasonably anticipated? 6-12

---

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?  Yes  No  
If so, explain.

This course will be open to graduate students in the College of Nursing, Sanders Brown Center Center on Aging and Gerontology, and additional departments by consent of instructor.

---

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 part of a proposed new program:  Yes  No

If yes, which?  
The Rehabilitation Sciences PhD program is in it's third year.

---

14. Will adding this course change the degree requirements in one or more programs?  Yes  No

If yes, explain the change(s) below  
\_\_\_\_\_  
\_\_\_\_\_

---

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

16. If the course is a 100-200 level course, please submit evidence (e.g., correspondence) that the Community College System has been consulted.

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

Na  
me

Susan A. Queen

Phone  
Extension

7-8447

---

\*NOTE: Approval of this course will constitute approval of the program change unless other program modifications are proposed.

---

ACTION OTHER THAN APPROVAL

**UNIVERSITY OF KENTUCKY  
COLLEGE OF HEALTH SCIENCES  
DEPARTMENT OF REHABILITATION SCIENCES**

**PHARMACOLOGY IN REHABILITATION  
RHB 712 SYLLABUS**

**Course Coordinator:**

Susan A. Queen, Ph.D., P.T.  
Office: Room 220, Research Facility 3  
Corner of Limestone and Kentucky Clinic Drive  
859-257-8447; squeen@uky.edu

**Course description:** This course will provide the basic science background to understand drug action and side effects and how these influence rehabilitation treatment strategies. The course will include the effects of age and disease processes on drug action, as well as newly developing treatment strategies. Students may take the course for 2 or 3 credits.

The format of this course will utilize formal lecture presentations incorporating relevant current literature. Students will also prepare and present a case study that includes medication history and the effect on rehabilitation therapy. Students taking the course for 3 credits will additionally prepare an in-depth, detailed summary of one class of drugs chosen based on the student's professional interests.

**Course objectives:**

- 1) Understand the normal mechanisms of drug absorption, distribution, metabolism, excretion and general mechanisms of action for prescription and OTC drugs.
- 2) Understand how the above mechanisms are affected by age and disease.
- 3) Learn the rehabilitation-significant side effects and influence on treatment strategies of
  - a) drug categories that affect rehabilitation treatment across age groups. (E.g. drugs affecting the sympathetic and parasympathetic nervous system, drugs for pulmonary disorders, drugs acting on the central nervous system, anti-inflammatory agents.)
  - b) drug categories most commonly used in children. (e.g. treatment of attention deficit disorders, cystic fibrosis, Duchenne's muscular dystrophy, cerebral palsy.)
  - c) drug categories most commonly used in treatment of adults (for Multiple Sclerosis, Parkinson's disease, cardiovascular disorders, psychiatric disorders, cerebrovascular accident.)
  - d) drug categories used across age groups to treat traumatic injury to brain or spinal cord.
  - e) drug categories that cause movement or cognitive disorders across age groups.
- 4) Understand the basis of drugs now in clinical trials for treatment of neuromusculoskeletal and cognitive disorders and how they influence rehabilitation strategies, especially those designed to facilitate functional outcome.

**Textbook:**

Ciccone, C. D., Pharmacology in Rehabilitation, 3<sup>rd</sup> Ed., F.A. Davis Co., Philadelphia, 2002.

Selected articles will be assigned, particularly those relating to effects of prescribed medications on tissue healing, cardiovascular function, cognition, balance, movement, and neuroplasticity.

**Course Assignments:**

- 1) **Case studies and assigned literature:** Students will read case studies prior to class and will participate in the discussion of the studies.
- 2) **Midterm Exam:** Multiple choice and essay format.
- 3) **Final Exam:** Essay format.
- 4) **Manuscript (s):** Each student will select either a case study that includes medication history and detail the potential and observed effects on rehabilitation. Students taking the course for 3 credits will prepare an in depth, detailed summary of a class of drugs relevant to rehabilitation specialists.
- 5) **Class presentation:** Students will present a 30 min talk on the topic presented in each manuscript.

**Grading:**

**2 Credits**

Midterm	= 30 points	Grading Scale: A= 90-100
Final Exam	= 40 points	B = 80-89
Paper, Presentation and Critique	= 20 points	C = 70-79
Class participation	= 10 points	E = less than 70

**Grading:**

**3 Credits**

Midterm	= 30 points	Grading Scale as above
Final Exam	= 40 points	
Paper, Presentation and Critique	= 30 points	
Additional Project, presentation	= 40 points	
Class participation	= 10 points	

**Course Expectations:**

- 1. Attendance at class is expected.
- 2. Students are expected to complete reading assignments and participate in class discussions.
- 3. All assignments must be completed to receive a grade in the course.
- 4. Collaborative teamwork with classmates is expected.
- 5. Discuss with the professor any problems that arise in meeting class deadlines or attendance
- 6. Specific course expectations will be provided in writing.
- 7. Students will be informed of their progress throughout the course.

**Excused absences:** Acceptable reasons for excused absences are listed in Student Rights and Responsibilities, Section 5.2.4.2. Briefly, these include illness, death of someone in the student's immediate family, University sponsored trips, major religious holidays, and other circumstances the instructor finds reasonable.

**Inclement weather:** In case of inclement weather or emergencies, class will be held unless the University administration cancels classes. Students should use their judgment about weather to come to class.

**Cheating and plagiarism:** Descriptions of what constitutes cheating and plagiarism are found in Students Rights and Responsibilities, Sections 6.3.1 and 6.3.2. Be aware that the minimum punishment for either of these offenses is an "E" in the course.