#### Nikou, Roshan

From:	Graduate.Council.Web.Site@www.uky.edu
Sent:	Wednesday, September 03, 2008 2:52 PM
To:	Nikou, Roshan
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Subject:	Investigator Report

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College/Department/Unit: = Program: Doctoral Program in Nutritional Sciences Category:\_ = New Date\_for\_Council\_Review: = Sept 4, 2008 Recommendation\_is:\_ = Approve Investigator: = Brett Spear E-mail Address = bspear@uky.edu

1\_\_Modifications: = The program is being modified in response to changes in the Graduate Center for Nutritional Sciences, particularly in response to the move from the Graduate School to the College of Medicine. It also reflects changes in the M.S. program in Nutritional Sciences and tries to mesh the Ph.D. and M.S. programs more effectively. Furthermore, the changes reflect the fact that Ph.D. students can now enter the program through the the Integrated Biomedical Sciences (IBS) program or through the Nutritional Sciences (NS) program. In terms of coursework, there really are not many changes. Since students are already required to take IBS601 and 602, the changes in NS601 and NS602 are well justified.

Also, the elimination of NS701 and requirement of NS603 (a new course) also makes sense. Otherwise, there really are not many other other changes in the student coursework. One difference between NS and IBS students is that IBS students will have to take IBS604 and IBS605, whereas NS students will not have to take these courses. This may impact the number and type of electives that IBS and NS students take, but this is considered to be a minor issue. In either case, students should receive solid coursework in the area of nutrition.

2\_\_Considerations:

3\_\_Contacts: = Discussed briefly with Drs. Geza Bruckner and Howard Glauert.

4\_\_Additional\_Information: = No additional concerns. The changes are well justified and approval is recommended.

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# **Cover Letter: Program and Curriculum Changes in the Nutritional Sciences Doctoral and Masters Programs:**

Please note that the recommended changes for the Doctoral and Masters programs in Nutritional Sciences has been developed and approved by faculty from the Graduate Center for Nutritional Sciences, College of Health Sciences, Agriculture, as well as staff representation from the UK Hospital Dietetics program and staff representation from Central Baptist Hospital. The curriculum, as submitted, was also approved by the Nutritional Sciences Curriculum Committee and the core faculty in the Graduate Center for Nutritional Sciences. Approval, for adding Counseling Techniques EDP 605 and Epidemiology CPH 605 as Emphasis Area requirements, has been received from the respective colleges.

# UNIVERSITY OF KENTUCKY REQUEST FOR CHANGE IN DOCTORAL DEGREE PROGRAM

Program: Nutritional Sciences					
Department/Division:	Graduate C	enter for Nutritional Sciences			
College:	Medicine		Bulletin pp.:		
Degree title(Old):	Nutritional	Sciences	Degree (New):	Title	Nutritional Sciences
CIP Code:	30.1901				
Accrediting agency (if applicable): N/A					

#### I. PROPOSED CHANGE(S) IN PROGRAM REQUIREMENTS

	Current	Pronosed
	Current	Toposcu
1 Number of transfer credits allowed	Q	same
1. Ivumber of transfer credits anowed	3	same
2. Residence requirement	Minimum of one year before and after	same
(minimum of one year before and after	Oualifying Exams	
Qualifying Exams)		
3. Language(s) and/or skill(s) required	none	same
4. Provisions for monitoring progress	none	same
and termination criteria		
5 Total credit hours required (if applicable)	38 or 30	36 or 37
5. Total credit nours required (in applicable)	58 01 59	50 01 57
6. Required courses (if applicable)	NS/CNU601 Macronutrient Metabolism, 4	NS/CNU601 Integrated Nutritional
or required courses (in applicable)	credits	Sciences I, 3 credits
	NS/ASC 602 Micronutrient Metabolism, 4	NS/ASC/CNU 602 Integrated Nutritional
	credits	Sciences II, 3 credits
	NS 701, Nutrition and Chronic Disease, 4	NS/CNU/ASC 603 Integrated Nutritional
	credits	Sciences III, 2 credits
	NS/CNU/NFS 771 Graduate Seminar 1	NS/CNU/NFS 771 Graduate Seminar 1
	credit	credit
	NS/CNU/NFS 704 Current Topics, 1 credit	NS/CNU/NFS 704 Current Topics, 1 credit
	IBS 601/BCH607, Biomolecules I, 3 credits	IBS 601/BCH607, Biomolecules I, 3 credits
	IBS002/BCH008, Biomolecules II, 5 credits	IBS602/BCH008, Biomolecules II, 5 credits
	PGV 502 Principles of Physiology 5	PGV 502 Principles of Physiology 5
	credits	credits
	STA 570 Statistical Analysis, 4 credits	STA 570 Statistical Analysis, 4 credits
		,
	IBS 603 Cell Biology, 3 credits	IBS 603 Cell Biology, 3 credits
	Electives, 6 credits	Electives, 8 credits
	NS/CNU 609 Ethics in Clinical Sciences	NS/CNU 609 Ethics in Clinical Sciences
	Research, 1 credit, OR TOX 600, 1 credit	Research, 1 credit, OR TOX 600, 1 credit
7. Required distribution of courses within	No specific distribution required	No specific distribution required
program		
(if applicable)		

<ol> <li>Minor area or courses outside program required (if applicable)</li> </ol>	Not Applicable	Same
9.Distribution of courses levels required (400G-500/600-700)	No requirement	Same
10. Qualifying examination requirements	Written and oral examinations	Same

NOTE: To the extent that changes in 6. or 8. above involve additional courses in other programs, please include documentation from the program(s) pertaining to the availability of such courses.

# UNIVERSITY OF KENTUCKY REQUEST FOR CHANGE IN DOCTORAL DEGREE PROGRAM

11. Other requirements not covered above N/A

#### **II. RATIONALE FOR CHANGE(S)**

If the rationale involves accreditation requirements, please include specific references to those requirements.

We are realigning our courses and course requirements to better meet today's nutrition knowledge and skills needs for our students. With the move of the Graduate Center for Nutritional Sciences from the Graduate School to Medicine, we are revising both the MS and PhD curricula and are integrating the MS and PhD course requirements and curriculum as much as possible to avoid duplication. Specifically, we are removing lectures in basic biochemistry from NS 601 and NS 602, since all students will now be required to have graduate biochemistry before taking these courses. The material in NS 701 is being integrated with the material in NS 601 and NS 602 to form 3 new courses: NS 601, NS 602, and NS 603 (Integrated Nutritional Sciences I, II, and III). The removal of basic biochemistry from these courses and the integration of the material has allowed us to reduce the number of credit hours in these 3 courses from 12 to 8.

**Signatures of Approval:** 

Date of Approval by Department Faculty

/ 'Reported by Department Chair

Date of Approval by College Faculty

3-10-08

\*Date of Approval by Undergraduate Council Curriculum Committee

\*Date of Approval by Graduate Council

\*Date of Approval by Health Care Colleges Council (HCCC)

\*Date of Approval by Senate Council

\*Date of Approval by University Senate

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

4-29-08 by College Dean 10mg graduate Council Reported by

Curriculum Chair Committee

Reported by Graduate Council Chair Heili Mall

Reported by HCCC Chair

Reported by Senate Council Office

Reported by Senate Council Office

Rev 07/06 College of medicine Faculty Commit

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#### **Curriculum Requirements**

#### Academic Course Prerequisites to Program:

Biology (2 semesters) General Chemistry (2 semesters) Organic Chemistry (1 semester) Undergraduate Biochemistry and Physiology highly recommended

All students are required to complete the Core Curriculum. Course descriptions are found in **Appendix A**.

Some courses are cross-listed with other units and departments, but for clarity, only the "NS" prefixes are listed below. Students in the Nutritional Science programs should always register under the "NS" prefix.

#### **Core Courses:**

NS 601	Integrated Nutritional Sciences I	3 credits
NS 602	Integrated Nutritional Sciences II	3 credits
NS 603	Integrated Nutritional Sciences III	2 credits
NS 704	Current Topics in Nutrition	1 credit
NS 771	Graduate Seminar in Nutritional Sciences	1 credit**
NS 609	Ethics in Clinical Research	1 credit
or TOX 600	or Ethics in Scientific Research	
STA 570	Basic Statistical Analysis	4 credits
IBS 601/BCH 607	Biomolecules & Metabolism	3 credits
or CHE 550	or Biological Chemistry I	3 credits
IBS 602/BCH 608	Biomolecules & Molecular Biology	3 credits
or CHE 552	or Biological Chemistry II	3 credits
IBS 603	Cell Biology	3 credits
IBS 606	Integrated Medical Sciences	4 credits
or PGY 502	or Principles of Systems, Cellular and	
	Molecular Physiology	5 credits
Electives		8 credits

Total 36 - 37 credits

\*\*All Ph.D. students must register for 0 credit (except the semester register for 1 credit) and attend all GCNS seminars during their residency at the University of Kentucky. Minimum of 1 credit is required before qualifying examination. In addition, all GCNS doctoral candidates will present a seminar once/year post-qualifying exam.

# <u>Electives</u> The student must successfully complete a minimum of 8 credit hours in electives. Elective courses are recommended by the Advisor and approved by the Advisory Committee.

#### Suggested courses are listed below:

IBS	604	Cell Signaling	3 credits
IBS	605	Experimental Genetics	2 credits
IBS	607	Seminar in Integrated Biomedical Sciences	0 credit
IBS	609	Research in Integrated Biomedical Sciences	1 credit
NS/NF	S 607	Food-Related Behaviors	3 credits
NS/CN	U 606	Molecular Biology Applications in Nutrition	2 credits
NS	790	Research in Nutritional Sciences	1-6 credits
		(before qualifying exam)	
CNU	501	Nutraceuticals and Functional Foods	2 credits
CNU	611	Advanced Medical Nutrition Therapy	2 credits
CNU	612	Examination Skills for the Clinical Nutritionist	2 credits
CNU/N	IS 604	Lipid Metabolism	3 credits
CNU/N	IS 608	Nutritional Immunology	3 credits
CNU/N	IS 605	Wellness and Sports Nutrition	3 credits
CNU/N	IS 702	Problem-Based Case Studies	1-5 credits
ASC	681	Energy Metabolism	3 credits
ASC	683	Protein metabolism	3 credits
ASC	689	Physiology of Nutrient Digestion/Absorption	3 credits
ASC	684	Advanced Ruminent Nutrition	3 credits
ASC	686	Advanced Non-ruminant Nutrition	3 credits
FSC	638	Food Proteins	3 credits
FSC	640	Food Lipids	3 credits
FSC	434G	Food Chemistry	4 credits
BCH	610	Biochemistry of Lipids and Membranes	3 credits
BCH/B	IO/MI 615	Molecular Biology	3 credits
CPH 60	05/PM 620	Epidemiology	3 credits
CPH	645	Food Systems, Malnutrition and Public Health	3 credits
EDP	661	Counseling Techniques II	3 credits
GS	610	College Teaching	3 credits
KHP	420G	Physiology of Exercise	3 credits
KHP	621	Advanced Exercise Physiology	3 credits
KHP	621	Exercise and Coronary Heart Disease	3 credits
KHP	720	Sport Medicine	3 credits
KHP	781	Theory and Methodology of Body Composition	
		Assessment	3 credits
MI	685	Advanced Immunology	3 credits
MI	710	Molecular Cell Biology	3 credits
PGY	604	Advanced Cardiovascular Physiology	3 credits
PGY	607	Hormonal Control Mechanisms	3 credits
BCH	609	Plant Biochemistry	3 credits

# **Residency Requirement**

NS	767	Residency Credit in Nutritional Sciences	2 hr/semester
		(post-qualifying exam)	

### **Examples of Ph.D. Curricula**

#### A. Ph.D. students recruited from IBS Program

#### **First Year in IBS Program**

## **Fall Semester**

IBS 601	Biomolecules & Metabolism	3 credits
IBS 603	Cell Biology	3 credits
IBS 605	Experimental Genetics	2 credits
IBS 607	Seminar in Integrated Biomedical Sciences	0 credit
IBS 609	Research in Integrated Biomedical Sciences	<u>1</u> credit
	-	9

# **Spring Semester**

IBS 602	Biomolecules & Molecular Biology	3 credits
IBS 604	Cell Signaling	3 credits
IBS 606	Integrated Medical Sciences	<u>4</u> credits
		10

# Second Year (First Year in Nutritional Sciences)

#### **Fall Semeter**

NS 601	Integrated Nutritional Sciences I	3 credits
STA 570	Basic Statistical Analysis	4 credits
NS 771	Graduate Seminar in Nutritional Sciences	<u>1</u> credit
		ð

# **Spring Semester**

NS 602	Integrated Nutritional Sciences II	3 credits
NS 603	Integrated Nutritional Sciences III	2 credits
NS 704	Current Topics in Nutrition	1 credit
NS 609	Ethics in Clinical Research	1 credit
NS 771	Graduate Seminar in Nutritional Sciences	0 credit
Elective		<u>2</u>
		9

# B. Ph. D. students directly recruited into Nutritional Sciences Program

# <u>First Year</u>

# **Fall Semester**

BCH 607	Biomolecules & Metabolism	3 credits
or CHE 550	or Biological Chemistry I	3 credits
IBS 603	Cell Biology	3 credits
NS 609	Ethics in Clinical Research	1 credit
NS 771	Graduate Seminar in Nutritional Sciences	0 credit
Elective		2 credits
		9

# **Spring Semester**

BCH 608	Biomolecules & Molecular Biology	3 credits
IBS 606	Integrated Medical Sciences	4 credits
NS 771	Graduate Seminar in Nutritional Sciences	0 credit
Electives		<u>2</u> credits
		9

# Second Year

# **Fall Semester**

NS 601	Integrated Nutritional Sciences I	3 credits
NS 771	Graduate Seminar in Nutritional Sciences	0 credit
STA 570	Basic Statistical Analysis	4 credits
Electives		2 credits
		9

# **Spring Semester**

NS 602	Integrated Nutritional Sciences II	3 credits
NS 603	Integrated Nutritional Sciences III	2 credits
NS 771	Graduate Seminar in Nutritional Sciences	1 credit
NS 704	Current Topics in Nutrition	1 credit
Elective		<u>2</u> credit
		9