

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
		<hr/>
		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.

Electives 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/NFS	607	Food-Related Behaviors	3 credits
NS/CNU	606	Molecular Biology Applications in Nutrition	2 credits
NS	790	Research in Nutritional Sciences (before qualifying exam)	1-6 credits
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/NS	604	Lipid Metabolism	3 credits
CNU/NS	608	Nutritional Immunology	3 credits
CNU/NS	605	Wellness and Sports Nutrition	3 credits
CNU/NS	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 Ruminant 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/BIO/MI	615	Molecular Biology	3 credits
CPH 605/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 (post-qualifying exam)	2 hr/semester
----	-----	--	---------------

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 Semester

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
		8

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

First Year

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		<u>2</u> 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		<u>2</u> 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