

Food, Nutrition and Health (FNAH)

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Program Description: The School of Human Environmental Sciences offers a major program in Food, Nutrition and Health leading to a B.S.H.E.S. degree. The school also offers a minor in Human Nutrition. Interest and aptitude for the biological and physical sciences as well as public health fields that support nutrition science are central to successfully completing the major program.

Requirements for B.S.H.E.S. in Food, Nutrition and Health

State minimum core (<http://catalog.uark.edu/undergraduatecatalog/gened/stateminimum/>) and discipline specific general education (<http://catalog.uark.edu/undergraduatecatalog/gened/generaleducation/>) requirements:

(Course work that meets state minimum core requirements is in bold.)

University Requirements	1
UNIV 1001 University Perspectives	
Communications	12
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (unless exempt)	
ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023) (unless exempt)	
COMM 1313 Public Speaking (ACTS Equivalency = SPCH 1003)	
Select one of the following:	
ACOM 3143 Communicating Agriculture to the Public or ENGL 306 Technical and Professional Writing (ACTS Equivalency = ENGL 2023)	
U.S. History and Government	3
Choose from U.S. History and Government Core Courses	
Mathematics	6
MATH 1203 College Algebra (ACTS Equivalency = MATH 1103) (or higher level math)	
STAT 2303 Principles of Statistics (ACTS Equivalency = MATH 2103)	
Sciences	8
CHEM 1073 Fundamentals of Chemistry (ACTS Equivalency & CHEM 1071L= CHEM 1214 Lecture) and Fundamentals of Chemistry Laboratory (ACTS Equivalency = CHEM 1214 Lab)	
AND 4 hours from University science core list	
Or	

CHEM 1103 University Chemistry I (ACTS Equivalency = & CHEM 1101L CHEM 1414 Lecture) & CHEM 1123 and University Chemistry I Laboratory (ACTS & CHEM 1121L Equivalency = CHEM 1414 Lab) and University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture) and University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab)

Fine Arts and Humanities 6

Choose from Fine Arts and Humanities Core Courses (Select 3 hours from each)

Social Sciences 9

PSYC 2003 General Psychology (ACTS Equivalency = PSYC 1103)

**HDFS 2413 Family Relations
or HDFS 1403 Life Span Development**

Choose 3 hours from University Social Science Core List

FNAH Requirements 33

NUTR 1213 Fundamentals of Nutrition

NUTR 2113 Principles of Foods
& NUTR 2111L and Principles of Foods Laboratory

HOSP 2611 Foodservice Sanitation

NUTR 3103 Culinary Nutrition
& NUTR 3101L and Culinary Nutrition Lab

NUTR 3213 Nutrition Education and Counseling

NUTR 4001 Nutrition Seminar

NUTR 4103 Research Methods in Nutrition
& NUTR 4101L and

NUTR 4223 Life Cycle Nutrition

NUTR 4243 Community Nutrition

NUTR 4303 Cultural Perspectives on Foods

NUTR 4403 Recipe Modification
& NUTR 4401L and Recipe Modification Lab

Electives 42

The following electives will provide an area of focused study for students. Students will discuss with advisor to select courses to complete degree requirements.

Food Service Systems Management

HOSP 2603 Purchasing and Cost Control

NUTR 3603 Quantity Foods

HOSP 3653 Hospitality, Dietetic Management and Human Resources

Nutrition Research

BIOL 1543 Principles of Biology (ACTS Equivalency = BIOL & BIOL 1541L 1014 Lecture)
and Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab)

BIOL 2323 General Genetics
& BIOL 2321L and General Genetics Laboratory

BIOL 2533 Cell Biology
& BIOL 2531L and Cell Biology Laboratory

CHEM 2613 Organic Physiological Chemistry (ACTS & CHEM 2611L Equivalency = CHEM 1224 Lecture)
and Organic Physiological Chemistry Laboratory (ACTS Equivalency = CHEM 1224 Lab)

CHEM 3813 Elements of Biochemistry

NUTR 4213	Advanced Nutrition
BIOL 4703	Mechanisms of Pathogenesis
Health and Wellness	
NUTR 2203	Sports Nutrition
PBHL 1103	Personal Health and Safety
PBHL 2663	Terminology for the Health Professions
PBHL 3202	Health Care and Public Health Policy
PBHL 3643	Public Health Program Planning and Evaluation
EXSC 3153	Exercise Physiology
The number of additional electives will depend on the focus area that the student chooses.	
Total Hours	120

Food, Nutrition and Health B.S.H.E.S., Eight-Semester Degree Program

Students wishing to follow the degree plan in Food, Nutrition and Health major should go to the Eight-Semester Degree Policy (<http://catalog.uark.edu/undergraduatecatalog/academicregulations/eightsemesterdegreecompletionpolicy/>) in the Academic Regulations chapter for university requirements of the program.

	Units	
	Fall	Spring
Satisfies General Education Outcome 3.4:		
CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture) & CHEM 1101L University Chemistry I Laboratory (ACTS Equivalency = CHEM 1414 Lab)	4	
NUTR 1213 Fundamentals of Nutrition	3	
HOSP 2611 Foodservice Sanitation	1	
UNIV 1001 University Perspectives	1	
MATH 1203 College Algebra (ACTS Equivalency = MATH 1103) (or higher level math) (Satisfies General Education Outcome 2.1)	3	
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (unless exempt) (Satisfies General Education Outcome 1.1)	3	
ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023) (unless exempt) (Satisfies General Education Outcome 1.1)		3
COMM 1313 Public Speaking (ACTS Equivalency = SPCH 1003) (Satisfies General Education Outcomes 1.2 and 5.1)		3
Fine Arts State Minimum Core Elective (Satisfies General Education Outcome 3.1) ¹		3
Humanities State Minimum Core Elective (Satisfies General Education Outcome 3.2) ²		3
Science State Minimum Core Elective (Satisfies General Education Outcome 3.4)		4
Year Total:	15	16

	Units	
	Fall	Spring
NUTR 2113 Principles of Foods & NUTR 2111L Principles of Foods Laboratory	4	
General Elective		6

PSYC 2003 General Psychology (ACTS Equivalency = PSYC 1103) (Satisfies General Education Outcome 3.3)	3	
STAT 2303 Principles of Statistics (ACTS Equivalency = MATH 2103)	3	
Satisfies General Education Outcomes 3.3, 4.1, and 4.2:		
HDFS 2413 Family Relations or HDFS 1403 Life Span Development		3
ENGL 3053 Technical and Professional Writing (ACTS Equivalency = ENGL 2023) or ACOM 3143 Communicating Agriculture to the Public		3
Electives		9
Year Total:	16	15

	Units	
	Fall	Spring
NUTR 3213 Nutrition Education and Counseling	3	
NUTR 3103 Culinary Nutrition & NUTR 3101L Culinary Nutrition Lab	4	
Social Science State Minimum Core Elective (Satisfies General Education Outcome 3.3)	3	
US History or Government State Minimum Core Elective	3	
Electives ³	3	
NUTR 4243 Community Nutrition		3
Electives ³		9
NUTR 4303 Cultural Perspectives on Foods or NUTR 4403/4401L Recipe Modification		3
Year Total:	16	15

	Units	
	Fall	Spring
Electives ³	12	
NUTR 4223 Life Cycle Nutrition	3	
Electives ³		4
NUTR 4303 Cultural Perspectives on Foods or NUTR 4403 Recipe Modification		3
NUTR 4001 Nutrition Seminar (Satisfies General Education Outcome 6.1)		1
NUTR 4103 Research Methods in Nutrition & NUTR 4101L		4
Year Total:	15	12

Total Units in Sequence: 120

¹ The Fine Arts Elective courses which satisfy General Education Outcome 3.1 include: ARCH 1003, ARHS 1003, COMM 1003, DANC 1003, LARC 1003, MLIT 1003, MLIT 1003H, MLIT 1013, MLIT 1013H, MLIT 1333, THTR 1003, THTR 1013, or THTR 1013H.

- ² The Humanities Elective courses which satisfy General Education Outcome 3.2 include: AAST 2023, ANTH 1033, ARCH 1013, CLST 1003, CLST 1003H, CLST 1013, COMM 1233, DANC 1003, ENGL 1213, GNST 2003, HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2003, HIST 2013, HUMN 1124H, HUMN 2213, LALS 2013, MRST 2013, MUSY 2003, MUSY 2003H, PHIL 2003, PHIL 2003C, PHIL 2003H, PHIL 2103, PHIL 2103C, PHIL 2303, THTR 1003, THTR 1013, THTR 1013H, WLIT 1113, WLIT 1123, or intermediate-level world language (usually 2003-level).
- ³ Students must complete 40 hours of upper division courses (3000-4000 level). It is recommended that students consult with their academic adviser when making course selections.

Minor in Human Nutrition (NUTR-M)

Required Courses	13
NUTR 1213 Fundamentals of Nutrition	
NUTR 3203 Human Nutrition	
NUTR 2113 Principles of Foods & NUTR 2111L and Principles of Foods Laboratory	
NUTR 4213 Advanced Nutrition	
Select 6 hours from the following:	6
NUTR 2203 Sports Nutrition	
NUTR 4223 Life Cycle Nutrition	
NUTR 4243 Community Nutrition	
Total Hours	19

Courses

NUTR 1201. Introduction to the Dietetic Profession. 1 Hour.

Introduction to profession of dietetics and nutrition including history, scope and future of professionals with emphasis on academic preparation, internships, acquisition of professional credentials, career laddering and career opportunities. Guest speakers will supplement lectures and assignments. Prerequisite: HNAD or FNAH majors only or by department consent. (Typically offered: Fall and Spring)

NUTR 1213. Fundamentals of Nutrition. 3 Hours.

The functions of food, body processes, optimum diets in relation to health and physical fitness. (Typically offered: Fall and Spring)

NUTR 1213H. Honors Fundamentals of Nutrition. 3 Hours.

The functions of food, body processes, optimum diets in relation to health and physical fitness. (Typically offered: Fall and Spring)

This course is equivalent to NUTR 1213.

NUTR 2111L. Principles of Foods Laboratory. 1 Hour.

Laboratory exercises and practice applicable of Principles of Foods. Lab 3 hours. Corequisite: NUTR 2113. (Typically offered: Fall and Spring)

NUTR 2113. Principles of Foods. 3 Hours.

Physical and chemical characteristics of foods, organized by food science and nutrition, protein foods, phytochemicals, complex and refined carbohydrates, and fats. Emphasis on food preparation and storage methods and effect on foods. Investigation and practice of food preparation basics, cooking and baking techniques, knife skills, food safety, and sensory evaluation of food. Corequisite: NUTR 2111L. Prerequisite: NUTR 1213, a C or higher in HOSP 2611, (CHEM 1073, or CHEM 1103, or CHEM 1203), one of the following programs, minors or concentrations: (HNADBS, FNAHBS, HESCBS, NUTR-M, or CATEBS-FCSE) and students must also have a current ServSafe Manager's Certification. (Typically offered: Fall and Spring)

NUTR 2203. Sports Nutrition. 3 Hours.

The integration of concepts from nutrition and exercise physiology into an applied multidisciplinary study of how food, beverages and dietary supplements influence physical performance. Prerequisite: NUTR 1213. (Typically offered: Summer)

NUTR 3101L. Culinary Nutrition Lab. 1 Hour.

Students will explore ways to apply evidence based nutrition research to culinary application. It addresses the fundamental culinary skills and knowledge required to prepare meals that impact the nutritional and sensory appeal of food. Corequisite: NUTR 3103. Prerequisite: NUTR 2113 and NUTR 2111L. (Typically offered: Fall)

NUTR 3101M. Honors Culinary Nutrition Lab. 1 Hour.

Students will explore ways to apply evidence based nutrition research to culinary application. It addresses the fundamental culinary skills and knowledge required to prepare meals that impact the nutritional and sensory appeal of food. Corequisite: NUTR 3103H. Prerequisite: NUTR 2113, NUTR 2111L and honors standing. (Typically offered: Fall)

This course is equivalent to NUTR 3101L.

NUTR 3103. Culinary Nutrition. 3 Hours.

This course is grounded in a food first approach to health and wellness with an emphasis on disease prevention. Students will study the physical and chemical characteristics of foods that increase nutritional value and will include exploration of the culinary nutrition modification process and application of these concepts to planning nutritionally balanced meals. Corequisite: NUTR 3101L. Prerequisite: NUTR 2113 and NUTR 2111L. (Typically offered: Fall)

NUTR 3103H. Honors Culinary Nutrition. 3 Hours.

This course is grounded in a food first approach to health and wellness with an emphasis on disease prevention. Students will study the physical and chemical characteristics of foods that increase nutritional value and will include exploration of the culinary nutrition modification process and application of these concepts to planning nutritionally balanced meals. Corequisite: NUTR 3101M. Prerequisite: NUTR 2113, NUTR 2111L and honors standing. (Typically offered: Fall)

This course is equivalent to NUTR 3103.

NUTR 3203. Human Nutrition. 3 Hours.

Fundamental human nutrition; nutritive value of foods and general functions of nutrients based on concepts derived from inorganic and organic chemistry. Examples relating nutrition to disease used as illustrations to deepen understanding of normal nutrition. Lecture 3 hours per week. Corequisite: CHEM 2613 and CHEM 2611L or CHEM 3603 and CHEM 3601L. Prerequisite: NUTR 1213. (Typically offered: Fall)

NUTR 3213. Nutrition Education and Counseling. 3 Hours.

Introduction to development of communication skills related to educational theory and techniques, development of educational materials, interpersonal communication skills, group dynamics, public speaking, and interviewing techniques. Includes discussion of counseling theory and methods, and how education and counseling are intertwined for nutrition professionals. Includes development of skills in nutrition counseling. Prerequisite: NUTR 1213, HNAD or FNAH majors only, and Junior or Senior standing. (Typically offered: Fall)

NUTR 3213H. Honors Nutrition Education and Counseling. 3 Hours.

Introduction to development of communication skills related to educational theory and techniques, development of educational materials, interpersonal communication skills, group dynamics, public speaking, and interviewing techniques. Includes discussion of counseling theory and methods, and how education and counseling are intertwined for nutrition professionals. Includes development of skills in nutrition counseling. Prerequisite: NUTR 1213, HNAD or FNAH majors only, Junior or Senior standing, and honors standing. (Typically offered: Fall)

This course is equivalent to NUTR 3213.

NUTR 3303. Nutrition Assessment. 3 Hours.

Principles of nutritional assessment and methodology including anthropometric, biochemical, clinical, and dietary evaluation. Emphasis placed on Nutrition Focused Physical Assessment, the interpretation of indices for all age groups in health and disease for both individuals and groups, and the application of nutrition assessment data in the nutrition care process. Prerequisite: NUTR 3203, junior standing and HNAD/FNAH majors only. (Typically offered: Spring)

NUTR 3603. Quantity Foods. 3 Hours.

This course focuses on menu planning for a variety of food service organizations, with consideration of age, special needs, diet type, cultural and ethical parameters. Students will design flavorful and appealing menus that meet current nutrition recommendations, guidelines and budgetary constraints. They will learn recipe standardization, quantity production, and overall quality control. Prerequisite: NUTR 1213, HOSP 2603, junior standing and Human Nutrition and Dietetics Bachelor of Science (HNADBS) or Food, Nutrition and Health Bachelor of Science (FNAHBS) majors only. (Typically offered: Spring)

NUTR 4001. Nutrition Seminar. 1 Hour.

Presentation and discussion of selected nutrition topics of current interest. Prerequisite: Senior standing and HNAD or FNAH majors only. (Typically offered: Spring) May be repeated for up to 2 hours of degree credit.

NUTR 4103. Research Methods in Nutrition. 3 Hours.

This course will cover applications of experimental methods for investigations in nutrition research and cookery. Pre- or Corequisite: STAT 2303. Prerequisite: Major in either Human Nutrition and Dietetics (HNAD), or Food, Nutrition and Health (FNAH) and senior standing only. (Typically offered: Spring)

NUTR 4213. Advanced Nutrition. 3 Hours.

Normal nutrition with emphasis on utilization of nutrients. Lecture and reports on current literature 3 hours per week. Prerequisite: CHEM 3813 and NUTR 3203. (Typically offered: Fall)

NUTR 4223. Life Cycle Nutrition. 3 Hours.

Study of normal nutrition emphasizing quantitative needs for nutrients as functions of biologic processes that vary during stages of the life cycle. Attention is given to preconception, pregnancy, childhood and older adults. Prerequisite: (HNAD majors and NUTR 3203) or (FNAH majors and junior standing). (Typically offered: Fall)

NUTR 4243. Community Nutrition. 3 Hours.

Identifying, assessing, and developing solutions for nutritional problems encountered at the local, state, federal, and international levels. Lecture 3 hours per week. Prerequisite: NUTR 1213, junior standing, and Food, Nutrition and Health Bachelor of Science in Human Environmental Science (FNAHBS) or Human Nutrition and Dietetic Bachelor of Science in Human Environmental Science (HNADBS) majors only. (Typically offered: Spring)

NUTR 4263. Medical Nutrition Therapy I. 3 Hours.

Principles of medical nutrition therapy with emphasis on the Nutrition Care Process, and the pathophysiology and current standards of practice for diseases and disorders. Pre- or corequisite: NUTR 3213 and NUTR 4213. Prerequisite: BIOL 2213, BIOL 2211L, CHEM 3813 and NUTR 3303. (Typically offered: Fall)

NUTR 4273. Medical Nutrition Therapy II. 3 Hours.

Principles of medical nutrition therapy with emphasis on the Nutrition Care Process, and the pathophysiology and current standards of practice for diseases and disorders. Lecture 3 hours per week. Prerequisite: NUTR 4263. (Typically offered: Spring)

NUTR 4303. Cultural Perspectives on Foods. 3 Hours.

Cultural competence is growing in importance as our population becomes more culturally diverse. This course covers cuisine and culture of various regions for the purpose of promoting respect and understanding for cultural diversity. Students will learn the history of foods, ingredients, flavor profiles, religious based food practices, etiquette, and customs. Corequisite: Junior or senior standing, and (Human Nutrition and Dietetics majors (HNADBS) or Food, Nutrition and Health majors (FNAHBS) or Hospitality Management (HOSPBS) majors). (Typically offered: Fall)

NUTR 4401L. Recipe Modification Lab. 1 Hour.

Students will use existing research to identify foods with preventative and functional properties and apply that information to develop recipes for improved nutritional quality and disease management. They will gather data to modify and refine the products and create an educational tool to promote their products. Corequisite: NUTR 4403. (Typically offered: Spring Odd Years)

NUTR 4403. Recipe Modification. 3 Hours.

Students will use existing research to identify foods with preventative and functional properties and apply that information to develop recipes for improved nutritional quality and disease management. They will gather data to modify and refine the product and create an educational tool to promote their product. Corequisite: NUTR 4401L. Prerequisite: NUTR 2113 and NUTR 2111L. (Typically offered: Spring)