

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 10051 University Perspectives	
Communications	12
ENGL 10103 Composition I (ACTS Equivalency = ENGL 1013)	
ENGL 10203 Composition II (ACTS Equivalency = ENGL 1023)	
SPCH 10003 Public Speaking (ACTS Equivalency = SPCH 1003)	
ACOM 31403 Communicating Agriculture to the Public or ENGL 30503 Technical and Professional Writing (ACTS Equivalency = ENGL 2023)	
U.S. History and Government	3
HIST 20003 or HIST 20103 or PLSC 20003	
Mathematics	6
MATH 11003 College Algebra (ACTS Equivalency = MATH 1103) (or higher level MATH)	
MATH 21003 Principles of Statistics (ACTS Equivalency = MATH 2103)	
Physical and Biological Sciences	8
Choose from one of the following Science groups:	
CHEM 14103 University Chemistry I (ACTS Equivalency = & CHEM 14101CHEM 1414 Lecture) and University Chemistry I Laboratory (ACTS & CHEM 14203Equivalency = CHEM 1414 Lab) and University Chemistry II (ACTS Equivalency = & CHEM 14201CHEM 1424 Lecture) and University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab)	
CHEM 12103 Fundamentals of Chemistry (ACTS Equivalency = & CHEM 12101CHEM 1214 Lecture) and Fundamentals of Chemistry Laboratory (ACTS Equivalency = CHEM 1214 Lab) (AND 4 hours from University science core list)	
Fine Arts and Humanities	6

Choose 3 hours from Fine Arts and 3 hours from Humanities State Minimum Core	
Social Sciences	9
PSYC 20003 General Psychology (ACTS Equivalency = PSYC 1103)	
HDFS 24103 Family Relations or HDFS 14003 Life Span Development	
Select 3 hours from Social Science state minimum core list	
FNAH Requirements	32
NUTR 12103 Fundamentals of Nutrition	
HOSP 26101 Foodservice Sanitation	
NUTR 21103 Principles of Foods & NUTR 21101 and Principles of Foods Laboratory	
NUTR 31043 Culinary Nutrition & NUTR 31041 and Culinary Nutrition Lab	
NUTR 32103 Nutrition Education and Counseling	
NUTR 40001 Nutrition Seminar	
NUTR 41003 Research Methods in Nutrition	
NUTR 42203 Life Cycle Nutrition	
NUTR 42403 Community Nutrition	
NUTR 43003 Cultural Perspectives on Foods	
NUTR 44033 Recipe Modification & NUTR 44031 and Recipe Modification Lab	
Electives	43
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 Management	
HOSP 26003 Purchasing and Cost Control	
NUTR 36003 Quantity Foods	
HOSP 36503 Hospitality, Dietetic Management and Human Resources	
Nutrition Research	
BIOL 10103 Principles of Biology (ACTS Equivalency = BIOL & BIOL 10101 1014 Lecture) and Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab)	
BIOL 23373 General Genetics & BIOL 23371 and General Genetics Laboratory	
BIOL 25473 Cell Biology & BIOL 25471 and Cell Biology Laboratory	
CHEM 26103 Organic Physiological Chemistry (ACTS & CHEM 26101Equivalency = CHEM 1224 Lecture) and Organic Physiological Chemistry Laboratory (ACTS Equivalency = CHEM 1224 Lab)	
CHEM 38103 Elements of Biochemistry	
NUTR 42103 Advanced Nutrition I	
BIOL 47073 Mechanisms of Pathogenesis	
Health and Wellness	
NUTR 22003 Sports Nutrition	
PBHL 11003 Personal Health and Safety	
PBHL 26603 Terminology for the Health Professions	
PBHL 32002 Health Care and Public Health Policy	
PBHL 36403 Public Health Program Planning and Evaluation	
EXSC 31503 Exercise Physiology	

General Electives (may be taken to meet hours requirement for program)

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.

First Year	Units	
	Fall	Spring
Satisfies General Education Outcome 3.4:		
CHEM 14103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture) & CHEM 14101 University Chemistry I Laboratory (ACTS Equivalency = CHEM 1414 Lab)	4	
NUTR 12103 Fundamentals of Nutrition	3	
HOSP 26101 Foodservice Sanitation	1	
UNIV 10051 University Perspectives	1	
MATH 11003 College Algebra (ACTS Equivalency = MATH 1103) (or higher level math) (Satisfies General Education Outcome 2.1)	3	
ENGL 10103 Composition I (ACTS Equivalency = ENGL 1013) (unless exempt) (Satisfies General Education Outcome 1.1)	3	
ENGL 10203 Composition II (ACTS Equivalency = ENGL 1023) (unless exempt) (Satisfies General Education Outcome 1.1)		3
SPCH 10003 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
Choose 4 Hours from the following: (Satisfies General Education Outcome 3.4)		4
CHEM 14203 University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture) & CHEM 14201 University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab)		
Science State Minimum Core Elective		
Year Total:	15	16

Second Year	Units	
	Fall	Spring
NUTR 21103 Principles of Foods & NUTR 21101 Principles of Foods Laboratory Electives ³	4	6
PSYC 20003 General Psychology (ACTS Equivalency = PSYC 1103) (Satisfies General Education Outcome 3.3)	3	

MATH 21003 Principles of Statistics (ACTS Equivalency = MATH 2103)	3	
Satisfies General Education Outcomes 3.3, 4.1, and 4.2:		
HDFS 24103 Family Relations or HDFS 14003 Life Span Development		3
ENGL 30503 Technical and Professional Writing (ACTS Equivalency = ENGL 2023) or ACOM 31403 Communicating Agriculture to the Public		3
Electives ³		9
Year Total:	16	15

Third Year	Units	
	Fall	Spring
NUTR 32103 Nutrition Education and Counseling	3	
NUTR 31043 Culinary Nutrition & NUTR 31041 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 42403 Community Nutrition		3
Electives ³		12
Year Total:	16	15

Fourth Year	Units	
	Fall	Spring
NUTR 42203 Life Cycle Nutrition	3	
NUTR 43003 Cultural Perspectives on Foods Electives ³	3	9
NUTR 44033 Recipe Modification & NUTR 44031 Recipe Modification Lab or NUTR 43003 Cultural Perspectives on Foods		4
NUTR 40001 Nutrition Seminar (Satisfies General Education Outcome 6.1)		1
NUTR 41003 Research Methods in Nutrition		3
Electives ³		4
Year Total:	15	12

Total Units in Sequence: **120**

¹ The Fine Arts Elective courses that satisfy General Education Outcome 3.1 include: ARCH 10003, ARHS 10003, COMM 10003, DANC 10003, LARC 10003, MUSC 10003, MUSC 100H3, MUSC 10103, MUSC 101H3, MUSC 13303, THTR 10003, THTR 10103, or THTR 101H3.

² The Humanities Elective courses which satisfy General Education Outcome 3.2 include: AAST 20203, ANTH 10303, ARCH 10103, CLST 10003, CLST 100H3, CLST 10103, COMM 12303, DANC 10003, ENGL 11103, ENGL 11203, ENGL 12103, GNST 20003, HIST 11193, HIST 111H3, HIST 11293, HIST 112H3, HIST 20003, HIST 20103, HUMN 112H4, HUMN 22103, LALS 20103, MRST 20103, MUSY 20003, MUSY 200H3, PHIL 20003, PHIL 200H3, PHIL 21003, PHIL 23003, THTR 10003, THTR 10103, THTR 101H3, or Intermediate-level world language.

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

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NUTR 12103	Fundamentals of Nutrition
NUTR 32003	Human Nutrition (Pre-: NUTR 12103; Pre- or Co-: CHEM 26103/26101)
NUTR 21103 & NUTR 21101	Principles of Foods and Principles of Foods Laboratory (Pre-: NUTR 12103, HOSP 26101 and ((CHEM 12103/12101) OR (CHEM 14103/14101))
NUTR 42103	Advanced Nutrition I (Pre-: CHEM 38103 and NUTR 32003)
Select 6 hours from the following:	
NUTR 22003	Sports Nutrition
NUTR 42203	Life Cycle Nutrition (Pre-: NUTR 32003)
NUTR 42403	Community Nutrition (Pre-: NUTR 12103)

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Bumpers College students who wish to pursue this minor should complete the major/minor change form at <https://forms.uark.edu/xfp/form/484>. Students pursuing a major outside of Bumpers College should contact their college's dean's office to request the minor to be added. If you have questions, contact Bumpers College Student Services at 479-575-2252 or afldsdean@uark.edu.

Total Hours

19

Courses

NUTR 12001. 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 12103. 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 21101. Principles of Foods Laboratory. 1 Hour.

Laboratory exercises and practice applicable of Principles of Foods. Lab 3 hours. Corequisite: NUTR 21103. (Typically offered: Fall and Spring)

NUTR 21103. 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 21101. Prerequisite: NUTR 12103, a C or higher in HOSP 26101, (CHEM 12103, or CHEM 14103, or CHEM 12073), 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 22003. 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 12103. (Typically offered: Summer)

NUTR 31041. 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 31043. Prerequisite: NUTR 21103 and NUTR 21101. (Typically offered: Fall)

NUTR 31043. 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 31041. Prerequisite: NUTR 21103 and NUTR 21101. (Typically offered: Fall)

NUTR 32003. 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 26103 and CHEM 26101 or CHEM 36053 and CHEM 36051. Prerequisite: NUTR 12103. (Typically offered: Fall)

NUTR 32103. 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 12103, HNAD or FNAH majors only, and Junior or Senior standing. (Typically offered: Fall)

NUTR 33003. 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 32003, junior standing and HNAD/FNAH majors only. (Typically offered: Spring)

NUTR 36003. 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 12103, HOSP 26003, 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 40001. 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 41003. Research Methods in Nutrition. 3 Hours.

This course will cover applications of experimental methods for investigations in nutrition research and cookery. Pre- or Corequisite: MATH 21003. Prerequisite: Major in either Human Nutrition and Dietetics (HNAD), or Food, Nutrition and Health (FNAH) and senior standing only. (Typically offered: Spring)

NUTR 42103. Advanced Nutrition I. 3 Hours.

This course will cover nutritional, physiological, and biochemical aspects of carbohydrate, protein, and lipid metabolism in humans and their implications in health and disease. Prerequisite: CHEM 38103 and NUTR 32003. (Typically offered: Fall)

NUTR 42203. 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 32003) or (FNAH majors and junior standing) or (Nutrition minors and junior standing) only. (Typically offered: Fall)

NUTR 42303. Advanced Nutrition II. 3 Hours.

This course will cover nutritional, physiological, and biochemical aspects of vitamins and minerals in humans, their functions and roles in metabolism, and their implications in health and disease. Prerequisite: NUTR 42103. (Typically offered: Spring)

NUTR 42403. 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 12103, 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 or Nutrition minors only. (Typically offered: Spring)

NUTR 42603. 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 32103 and NUTR 42103. Prerequisite: BIOL 24103, BIOL 24101, CHEM 38103 and NUTR 33003. (Typically offered: Fall)

NUTR 42703. 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 42603. (Typically offered: Spring)

NUTR 43003. 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 44031. 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 44033. (Typically offered: Spring)

NUTR 44033. 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 44031. Prerequisite: NUTR 21103 and NUTR 21101. (Typically offered: Spring)

NUTR 45003. Communicating Nutrition. 3 Hours.

This course focuses on communication skills related to food and human nutrition. It addresses the global challenges of nutrition misinformation, provides the basis for creating a timeless approach to consumer-focused messages and refines skills needed to design and deliver evidenced based presentations, web-based communications and demonstrations to promote and encourage dissemination of factual food and nutrition information to appropriate audiences. Prerequisite: NUTR 12103, SPCH 10003, and (ACOM 31403 or ENGL 30503), and (FNAH or HNAD majors only). (Typically offered: Fall)