

COLLEGE OF HEALTH PROFESSIONS
CLINICAL NUTRITION

STUDENT HANDBOOK



2024-2025 Academic Year

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Program Description:

The Department of Dietetics and Nutrition in the College of Health Professions (CHP) of the University of Arkansas for Medical Sciences (UAMS) offers a 100% online graduate program leading to a Master of Science degree in Clinical Nutrition (MSCN) through the UAMS Graduate School. The program is designed to prepare health professionals and registered dietitians/registered dietitian nutritionists to practice as advanced level practitioners. Other health professionals may participate in this program to enable them to practice as nutrition specialists within their professional arenas. Graduates of science programs may also use the program to develop research skills in nutrition.

Time Frame:

The program is designed to be completed over two years in full-time student status. The program may be completed over a maximum of a five-year period on a part-time basis. Within this time period, all students are required to complete 30-33 credit hours of coursework, plus 3-6 credit hours of research (students have the choice of a thesis option or a non-thesis option) for a total of 36 credit hours. All students must successfully complete a comprehensive examination, a final research paper (for thesis option & non-thesis option), and an oral defense of their research (for thesis option & non-thesis option) in order to complete the MSCN program.

Department Mission Statement, MSCN Program Goals and Student Learning Outcomes:

The mission and goals of the Department of Dietetics and Nutrition and the MSCN program reflect the missions and goals of the UAMS (<http://www.uams.edu/>), the UAMS Graduate School (<http://gradschool.uams.edu/>), and the CHP (<http://healthprofessions.uams.edu/>).

The mission of the Department of Dietetics and Nutrition is to provide education, research, and service by:

- Educating advanced-level practitioners in clinical nutrition and dietetics as educators, researchers, and clinical specialists;
- Providing initial and continuing education opportunities in clinical nutrition and dietetics for health care professionals;
- Developing and applying new knowledge and techniques in clinical nutrition and dietetics;
- Advancing nutritional care and health status, especially for Arkansans.

The goals of the MSCN graduate program are as follows:

- Develop science-based nutrition knowledge.
- Develop evidence-based practices in nutrition.
- Develop nutrition-research skills and practices.
- Develop communication skills in the area of nutrition-related practice and research.

Upon completion of the program, students will be able to:

- Describe connections between nutrition and health.
- Conduct nutrition-related research.
- Communicate nutrition-related research and practice.
- Apply nutrition knowledge toward evaluation and treatment of nutrition-related health conditions.

PROGRAM ADMISSION REQUIREMENTS

Admission requirement for the MSCN degree program includes the completion of a baccalaureate degree and other requirements by the UAMS Graduate School. The program applicant must apply for admission through the UAMS Graduate School.

MSCN program requirements for **domestic applicants** include (Submit all materials to the UAMS Graduate School: <https://gradschool.uams.edu/prospective-students/application-domestic>)

- Official transcripts from every college or university attended
 - Completion of a baccalaureate degree
 - Cumulative grade point average (GPA) of at least 2.85 on a 4.0 scale
- Three (3) reference letters (preferably, 2 from undergraduate or post-baccalaureate professor and 1 from an employer)
- Curriculum Vitae (CV) or Resume
- A Statement of Purpose, limited to 1,000 words, addressing:
 - Why the applicant is interested in the MSCN program at UAMS
 - Experiences that have prepared the applicant for the program
 - Short-term goals
 - Long-term goals

MSCN program requirements for **international applicants** include all items listed above for domestic applicants plus the following (Submit all materials to the UAMS Graduate School):

<https://gradschool.uams.edu/prospective-students/application-international>

- Official transcripts from every college and/or university attended authenticated for a 4.0 scale
- A TOEFL score of 79 (UAMS Graduate School institution code for submitting TOEFL scores: 6901)
- An Affidavit of Support according to the Graduate School website

Prerequisite Course Requirements:

While the program is designed primarily for students coming from a foods and nutrition or dietetics background, other health professionals and science graduates may qualify for the program. Three basic prerequisite courses or their equivalents are required for admission, which include:

- Basic human nutrition
- Biochemistry in nutrition science or physiological chemistry
- Medical nutrition therapy* (or diet in disease).

*For deficient students, this course (NUTR 5109 Medical Nutrition Therapy) is offered online through the Department of Dietetics and Nutrition.

Graduate Credit Transfer:

The MSCN Admissions Committee may consider a student's request to transfer a maximum of six (6) elective hours from another accredited graduate school in the United States. The MSCN Admissions Committee will determine the appropriateness of transfer credit for elective courses. Graduates of the UAMS/CAVHS Dietetic

Internship may transfer 12 hours of graduate credit from the internship program to the MSCN Program. (Please see page 14 in the Policies and Procedures section for further details regarding transfer of graduate credit hours)

Course Grade & Grade Maintenance Requirements:

- All required core NUTR courses offered through the MSCN program must be passed with a grade of “B” or better, and students maintain at least a 2.85 grade point average. Students who receive a final course grade lower than a “B” in any required core NUTR course must retake the course.
- Unless otherwise indicated, elective and other non-NUTR courses must be passed with a grade of “C” or better. Students who receive a final course grade lower than a “C” in any elective or non-NUTR course must retake the course.
- For all prerequisite courses required to enter the MSCN program, those courses (for example, NUTR 5109) must be passed with a grade of “B” or better. Students who receive a final course grade lower than a “B” in any prerequisite course required to enter the MSCN program (for example, NUTR 5109) must retake the course.
- In accordance with the Graduate School Student Handbook, if “a degree seeking graduate student has less than a 2.85 cumulative grade-point average on 9 or more semester credit hours of course work applicable to a graduate degree program, the student will be placed on academic probation. The student will be dismissed from the Graduate School if the cumulative GPA is not raised to 2.85 or above on the next nine hours of graduate course work approved by the student's program. If at the time a student is placed on academic probation, it is mathematically impossible for the student to raise their GPA to 2.85 on the next nine hours of graduate coursework, the student will be dismissed from the Graduate School.”

DEPARTMENT DEGREE COMPLETION & UNIVERSITY GRADUATION REQUIREMENTS

Department Degree Completion Requirements:

The program requires a total of 36 credit hours of coursework.

The **thesis option** consists of 30 credit hours of coursework and six (6) credit hours of thesis credit. The thesis will follow the Graduate School guidelines for a UAMS thesis; the final product is a thesis submitted to the UAMS Library. Degree requirements for students completing the thesis option include:

- Six (6) credit hours of NUTR 5121 Master’s Thesis in Clinical Nutrition
- 18 credit hours of required core courses
- 12 credit hours of elective courses

Master’s Thesis in Clinical Nutrition (NUTR 5121) credit hours are taken over two or more semesters. A final grade will not be submitted until after the thesis defense has been successfully completed. Please see pages 18-20 in the Policies and Procedures section for further details regarding the thesis option.

The **non-thesis option** consists of 33 credit hours of coursework and three (3) credit hours of research credit. The final product is a written research project report submitted to the Department Chair and faculty research committee members. Degree requirements for students completing the non-thesis option include:

- Three (3) credit hours of NUTR 5101 Research in Nutrition
- 18 credit hours of required core courses
- 15 credit hours of elective courses

Research in Nutrition (NUTR 5101) credit hours are taken over two or more semesters. A final grade will not be submitted until after the project defense has been successfully completed. Please see pages 20-22 in the Policies and Procedures section for further details regarding the non-thesis option.

All students are **required** to:

- **Prepare a successful research proposal.** Please see page 18 (#2) and page 21 (#2) in the Procedures section for details regarding the research proposal for thesis/non-thesis research.
- **Pass a comprehensive examination** over the designated required courses. The comprehensive examination must be completed prior to completing a thesis or non-thesis research project paper. Please see pages 16-17 in the Policies and Procedures section for details regarding the comprehensive examination.
- **Successfully write and then defend the written thesis/non-thesis** research findings in an oral presentation. Please see pages 19-20 (#4-9) and page 21-22 (#4-9) in the Procedures section for details regarding the written research findings for the thesis/non-thesis options. Please see page 20 (#10) and page 22 (#10) in the Procedures section for details regarding the oral defense for the thesis/non-thesis options.
 - Students do not own research project data. Students must obtain faculty permission for publication and/or dissemination of data relating to research projects.
- **Prepare an abstract** of research findings formatted for a National Meeting, such as the American Society for Nutrition (ASN) or the Food and Nutrition Conference and Expo (FNCE) annual conferences. All names of the student's faculty research committee, thesis or non-thesis, must be listed as co-authors on abstract submissions.
 - **Student Research Manuscript Submission Guidelines:**
 - While manuscript submission is not a requirement for completion of the MSCN program, any manuscripts stemming from project completion will follow these guidelines:
 - Research advisors will ask students in writing (email) whether they will take lead in writing a manuscript under supervision of the research advisor. The research advisor will determine order of authorship and co-authors included on the manuscript.
- **Complete a Department of Dietetics and Nutrition Exit Survey for the MSCN program**

University Graduation Requirements:

In completing the following the steps, the student will meet the requirements for graduation.

1. The student will complete two Interprofessional Education (IPE) components required by the Graduate School (Exposure Workshop and a Bridge Activity) (<https://ipe.uams.edu/student-curriculum/collegeprogram-ipe-timelines/>; <https://ipe.uams.edu/student-curriculum/>). Completion of these components is indicated in GUS under the Milestones heading.

2. The student will pass the written comprehensive exam administered after the student has completed courses of NUTR 5102 – Assessment of Nutritional Status, NUTR 5107 - Advanced Clinical Nutrition, NUTR 5111 - Nutrition Counseling, NUTR 5110 - Macronutrients and NUTR 5106 - Micronutrients. The comprehensive exam must be passed before the student can defend their final research work to meet all degree requirements. The Advisor will send a letter or email to the Office of the University Registrar and the Graduate School noting the date the student successfully passed the comprehensive examination.

- 3-A. For **Thesis**, **official notification from the Library** indicating the thesis has been accepted into the UAMS Library **is required**. The final and approved thesis must be submitted to the Library at least 10 working days prior to graduation. Copies of the accepted version of the thesis will be distributed to each member of the thesis committee and the Department Chair. Upon receipt of notification regarding successful thesis completion from the advisor, the Advisor will send a letter or email to the Associate Dean or Dean of Graduate School, and the Office of the University Registrar.

- 3-B. For **Non-Thesis**, a final copy of the written project report will be submitted to the Department Chair as well as each member of the Committee within a specified timeframe as determined by the advisor and research committee. The Advisor will send written notification (letter or email) to the Office of the University Registrar indicating the requirements have been met.

5. UAMS Clearance: Students are expected to go through a UAMS Clearance Procedure involving designated areas specified by the UAMS Graduate School Office. Please contact the Office of the University Registrar for additional details regarding the UAMS clearance process.

6. Fees. Degrees or transcript copies cannot be released until all fees are paid in full, including graduation fees, library fines, and any/all UAMS properties, *e.g.* keys and badges are returned.

DEGREE PLAN FOR THE MASTER OF SCIENCE DEGREE IN CLINICAL NUTRITION:

Course	Title F = Fall, Sp = Spring, Su = Summer	Credit Hours		
NUTR 51033	*Assessment of Nutritional Status (F)	3	Required Core Courses (18 total credit hours)	
NUTR 51043	Nutrition Research and Statistical Methods (Sp)	3		
NUTR 51063	*Nutrition and Metabolism: Micronutrients (Sp)	3		
NUTR 51073	*Advanced Clinical Nutrition (SP/SU)	3		
NUTR 51103	*Nutrition and Metabolism: Macronutrients (F)	3		
NUTR 51133	*Nutrition Counseling (F/Sp)	3		
NUTR 51053	Principles of Advanced Nutrition Support (Sp)	3	Elective Courses	
NUTR 51083	Diet and Cancer Prevention (F)	3		
NUTR 51143	Geriatric Nutrition (Sp)	3		• With ^A non-thesis option, 15 total credit hours of elective courses are required.
NUTR 51153	Pediatric Nutrition (F)	3		• With ^A thesis option, 12 total credit hours of elective courses are required.
NUTR 51163	Nutrition in Health, Wellness and Sports (Sp)	3		
NUTR 51173	Community Nutrition (F)	3		
NUTR 5120V	Special Topics in Clinical Nutrition (F/Sp/Su)	1-3		
			Credit Work in Research <ul style="list-style-type: none"> • Students are to enroll in to one credit hour at a time during their first semester of research work. • The subsequent semester credit load will be determined based upon progress made and timeline discussed during the academic advising session. 	
NUTR 5100V	Research in Nutrition (non-thesis) (F/Sp/Su)	3		
NUTR 5123V	Master's Thesis in Clinical Nutrition (F/Sp/Su)	6		
	Total Required Credit Hours (100% Online) for Program Completion	36		

DEPARTMENTAL PREREQUISITES OFFERED:

NUTR 51093 Medical Nutrition Therapy (F/Sp/Su)

*Required Courses covered on the Comprehensive Examination (please see the Policies and Procedures section page 16).

EXAMPLE PLAN OF STUDY FOR FULL-TIME THESIS STUDENT*

Fall 1		Spring 1	
NUTR 51033 Assessment of Nutritional Status	3 hrs.	NUTR 51043 Nutrition Research and Statistical Methods	3 hrs.
NUTR 51103 Nutrition and Metabolism: (Macro)	3 hrs.	NUTR 51063 Nutrition and Metabolism: (Micro)	3 hrs.
NUTR 51173 Nutritional Counseling	3 hrs.	NUTR 51073 Advanced Clinical Nutrition	3 hrs.
	9 hrs.		9 hrs.

Fall 2		Spring 2	
NUTR 51083 and/or NUTR 51143 and/or NUTR 51173 and/or NUTR 5120V	6 hrs.	NUTR 51053 and/or NUTR 51143 and/or NUTR 51163	6 hrs.
NUTR 5123V (Thesis)	3 hrs.	NUTR 5123V (Thesis)	3 hrs.
	9 hrs.		9 hrs.

EXAMPLE PLAN OF STUDY FOR FULL-TIME NON-THESIS STUDENT*

Fall 1		Spring 1	
NUTR 51033 Assessment of Nutritional Status	3 hrs.	NUTR 51043 Nutrition Research and Statistical Methods	3 hrs.
NUTR 51103 Nutrition and Metabolism: (Macro)	3 hrs.	NUTR 51063 Nutrition and Metabolism: (Micro)	3 hrs.
NUTR 51173 Nutritional Counseling	3 hrs.	NUTR 51073 Advanced Clinical Nutrition	3 hrs.
	9 hrs.		9 hrs.

Fall 2		Spring 2	
NUTR 51083 and/or NUTR 51143 and/or NUTR 51173 and/or NUTR 5120V	6-9 hrs.	NUTR 51053 and/or NUTR 51143 and/or NUTR 51163	6-9 hrs.
NUTR 5100V (Non-Thesis)	1-2 hrs.	NUTR 5100V (Non-Thesis)	1-2 hrs.
	7-11 hrs.		7-11 hrs.

*These plans of study represent example plans for full-time students. Optional plans providing flexibility are available on an individual basis for working/non-traditional students requiring a longer period for completion of the MSCN degree program.

MSCN STUDENT DEGREE PLANNER SHEET

Name: _____
 Phone: _____
 E-Mail: _____

Transfer Student: Yes No

Transfer Hours: _____

Transfer Information: _____

UAMS/CAVHSDI to MSCN Transfer Letter : Yes No

Date Sent: _____

Transfer Courses for UAMS/CAVHS Graduates:

Semester:

Year Taken:

DIET 5073 (replaces an elective course)	Practicum in Clinical Dietetics	Fall/Spring
DIET 5083 (replaces an elective course)	Practicum in Administrative Dietetics	Fall/Spring
DIET 5112 (replaces NUTR 51133)	Nutrition Counseling	Spring
DIET 5161 (replaces NUTR 51133)	Advanced Nutrition Seminar	Spring
DIET 5333 (replaces NUTR 51073)	Advanced Clinical Dietetics	Fall

OTHER APPROVED TRANSFERS:

***: Required Core Courses **Elective Courses (# of electives taken will depend on^Δ) ^ΔChoose One Option**

Course Number:	Course Description:	Semester:	Year Taken:
NUTR 5100V ^Δ	Research in Nutrition	Fall/Spring/Summer	
NUTR 51033*	Assessment of Nutritional Status	Fall	
NUTR 51043*	Nutrition Research and Stat Methods	Spring	
NUTR 51053**	Principles of Advanced Nutrition Support	Spring	
NUTR 51063*	Micronutrients	Spring	
NUTR 51073*	Advanced Clinical Nutrition	Spring/Summer	
NUTR 51083**	Diet and Cancer Prevention	Fall	
NUTR 51103*	Macronutrients	Fall	
NUTR 51133*	Nutrition Counseling	Fall/Spring	
NUTR 51143**	Geriatric Nutrition	Spring	
NUTR 51153**	Pediatric Nutrition	Fall	
NUTR 51163**	Nutrition in Health, Wellness and Sports	Spring	
NUTR 51173**	Community Nutrition	Fall	
NUTR 5120V**	Special Topics in Clinical Nutrition	Fall/Spring/Summer	
NUTR 5123V ^Δ	Master's Thesis in Clinical Nutrition	Fall/Spring/Summer	

COURSE DESCRIPTIONS:

NUTR 5100V Research in Nutrition

(See pages 20-22 of this handbook for additional information regarding this course)

Completion of a capstone nutrition research project under direction of faculty advisor and non-thesis project committee. Minimum of three hours required. One credit hour to be taken during the first semester of research work. Subsequent credit hour enrollment to be determined in discussion with your advisor. Not meeting planned mile-stones toward project completion as determined by the advisor will result in "IP" grading. Not completing missed mile-stones by the next semester of enrollment will result in a failing grade for the "IP" credit hour. Prerequisite: completion of, or concurrent enrollment in, all required courses in Clinical Nutrition. Co-requisite: approval of project advisor. *(1-3 credits)*

NUTR 51033 Assessment of Nutritional Status

Study of nutritional assessment systems and methodology including the latest technology in dietary, biochemical, anthropometric, and clinical evaluation. Interpretation and application of data in nutrition consultation. Prerequisites: Undergraduate courses in biochemistry, anatomy, physiology, nutrition, or equivalents. *(3 Credits)*

NUTR 51043 Nutrition Research and Statistical Methods

A study of research designs, statistics, and data collection methods used in nutrition research. Emphasis on planning metabolic, epidemiological, educational, and clinical studies including food composition and nutritional assessment surveys with basic and advanced statistical applications. *(3 Credits)*

NUTR 51053 Principles of Advanced Nutrition Support

Advanced study in the science of nutrition support explored through comprehensive review of the literature; discussion of the biochemical, physiological, and medical aspects of nutrition support; and application of these principles in clinical practice. *(3 Credits)*

NUTR 51063 Nutrition and Metabolism Micronutrients

This course reviews the roles of vitamins, minerals, and trace elements in metabolic processes, and their roles in human metabolism. Alterations in metabolic processes caused by specific vitamin deficiency diseases will be discussed. Metabolism of common drugs and drug-nutrient interactions will be reviewed. Prerequisite: NUTR 5110 or equivalent, or consent of faculty. *(3 Credits)*

NUTR 51073 Advanced Clinical Nutrition

Integration of principles of biochemistry, physiology, pathology, anatomy, psychology, anthropology, epidemiology, nutrition and food science into therapeutic use of foods and nutrients in disease prevention and treatment through a case-oriented approach. Prerequisites include Biochemistry, Diet in Disease, Anatomy and Physiology, or consent of faculty; DIET 5333 in the Dietetic Internship program can be substituted for this course. *(3 Credits)*

NUTR 51083 Diet and Cancer Prevention/Promotion

Focused on clinical and preclinical studies that address how dietary related factors, such as nutrients, bioactive food components and obesity, influence cancer development and cover major mechanisms by which dietary factors modify cancer risk. Prerequisites: A previous course in nutrition, biology, biochemistry, or physiology, or consent of faculty. *(3 Credits)*

NUTR 51093 Medical Nutrition Therapy

(NUTR 5109 is considered a prerequisite course for the MSCN program, and does not count toward the required 36 credit hours for program completion)

Introducing nutrition as a medical specialty from the perspective of disease prevention and treatment including assessment, patient interviewing strategies, medical terminology, nutrition care plan techniques, and prevention strategies. Prerequisites: a course in nutrition and in organic biochemistry or equivalent, or consent of faculty. *(3 Credits)*

NUTR 51103 Nutrition and Metabolism Macronutrients

Reviews cell function, including acid base, utilization of nutrients in metabolic processes, and roles of specific nutrients in human metabolism. Physiology and organ systems function as related to nutrition will also be addressed. Alterations in metabolic processes caused by specific diseases will be discussed. *(3 Credits)*

NUTR 51133 Nutrition Counseling

Covers methods, strategies, and evaluation techniques of nutrition and diet counseling; develops interviewing and counseling skills for individual or group settings; practice application of appropriate education theories, motivation techniques, and media sources. Prerequisite: NUTR 5107 or DIET 5333, or consent of faculty. *(3 credits)*

NUTR 51143 Geriatric Nutrition

Examines the relationships between nutrition and physiologic aging. The impact of aging on nutritional requirements, effects of chronic and acute disease, effects of nutrition on the aging process, and nutrition programs for older adults are explored. Students will actively analyze and discuss research literature. Prerequisite: one of the following courses NUTR 5110, NUTR 5106, NUTR 5107, DIET 5333, or consent of faculty. *(3 Credits)*

NUTR 51153 Pediatric Nutrition

This course describes the relationship of growth and development to nutrient requirements, from infancy to adolescence. The assessment of feeding practices, food habits, and nutritional status in growth problems, health and diseases will be discussed. Nutritional interventions and therapies for specific conditions will be planned. *(3 Credits)*

NUTR 51163 Nutrition in Health, Wellness and Sports

This course describes the application of advanced principles of normal and preventive nutrition to health and fitness, physical performance, disease prevention, and health promotion in dietetic practice. It relates clinical research in exercise physiology to decision making in wellness and sports nutrition counseling. Prerequisites: one of the following courses NUTR 5110, NUTR 5106, NUTR 5107, DIET 5333, or consent of faculty. *(3 Credits)*

NUTR 51173 Community Nutrition

This advanced-level course will provide the student with a framework to approach, analyze, and work with the community nutrition problems. The needs of different populations and resources within the community will be discussed. This course will cover nutritional needs assessment, nutritional education and public policy. Prerequisites: one of the following courses NUTR 5110, NUTR 5106, NUTR 5107, DIET 5333, or consent of faculty. *(3 Credits)*

NUTR 5120V Special Topics in Clinical Nutrition

Advanced work in selected topics of current interest and investigation in clinical nutrition. Topics might include new research and guidelines in the use of nutrition or selected nutrients to prevent or treat a specific disease state such as diabetes, digestive diseases, osteoporosis, obesity, or cardiovascular diseases. (1-3 Credits)

NUTR 5123V Master's Thesis in Clinical Nutrition

(See pages 18-20 of this handbook for additional information regarding this course)

Under supervision of graduate faculty, an original research study will be designed and conducted with written thesis following Graduate School guidelines. Minimum of six hours required. One credit hour to be taken during the first semester of research work. Subsequent credit hour enrollment to be determined in discussion with your advisor. Not meeting planned mile-stones toward project completion as determined by the advisor will result in "IP" grading. Not completing missed mile-stones by the next semester of enrollment will result in a failing grade for the "IP" credit hour. Prerequisite: consent of faculty. (1-6 credits)

POLICIES AND PROCEDURES

Transfer of Credit Hours into the Master of Science Degree Program in Clinical Nutrition

Policy:

The University of Arkansas for Medical Sciences will permit up to a total of six (6) graduate credits from another recognized graduate school in the United States to be transferred toward elective course credit hours, provided the grades are “B” or better (4.0 scale) and the subjects are acceptable as part of the student’s program, as determined through appropriate department procedures.

The Department of Dietetics and Nutrition will permit a student to transfer 12 hours of graduate credit from the UAMS/CAVHS Dietetic Internship upon completion of that program and upon admission into the MSCN program. A graduate of the UAMS/CAVHS Dietetic Internship program may apply for admission to the MSCN program; the Department Chair will petition on behalf of the student, to the Dean of the Graduate School to accept a transfer of the 12 credit hours from the internship program.

To request the transfer of 12 credit hours to be transferred from the UAMS/CAVHS Dietetic Internship to the MSCN graduate program the student must contact the offices of the CHP and complete the transcript request form. Information regarding transfer of UAMS/CAVHS Dietetic Internship credits is available at:

<https://healthprofessions.uams.edu/programs/dieteticsandnutrition/clinical-nutrition/transfer-credits/>.

Procedures:

Upon admission to the MSCN degree program, the student and an academic advisor will meet to develop a degree plan including discussion of any previous coursework for which a transfer of credit might be requested. All previous graduate coursework as shown on all official transcripts will be reviewed. The graduate coursework that meets the student’s degree goals will be considered for transfer credit by the Department Admission Committee.

1. The student will prepare a letter to the Department Chair requesting transfer of credit, providing all necessary details such as name of college, name of course, course number, semester or quarter in which course was taken, and the grade received in the course. The letter will be co-signed by the academic advisor.
2. The Department Admission Committee meets to determine if courses are appropriate to transfer as elective courses.
3. If approved by the Department Admission Committee, the Department Chair will write an official cover letter or email to the Dean of the Graduate School recommending acceptance of the transfer of credits for the designated elective course(s) not to exceed six hours of credit from another recognized graduate

school or 12 hours of credit from the UAMS/CAVHS Dietetic Internship program. A form available on the Office of the University Registrar website must be completed and submitted along with the request.

4. The Department Chair will receive notification from the Dean of the Graduate School by letter or email indicating the acceptance or rejection of the request and will notify the student.

Handling Course- and/or Program-Related Issues:

For course-related issues, the student must contact the course instructor. If the issue is not resolved with the course instructor, the student may contact the Department Chair. If the issue remains unresolved, the student may contact the Dean of the Graduate School.

For program-related issues, the student must contact the Department Chair. If the issue remains unresolved, the student may contact the Dean of the Graduate School.

The UAMS Graduate School has a Grievance Policy and Procedures for addressing student *grievances*. “A ‘grievance’ means a dispute concerning the status, rights, benefits, obligations and responsibilities of a student, including the availability of services for that student, under established UAMS programs and activities pursuant to regulations, policies and practices of the university.” Please see the Graduate School Student Handbook for additional information regarding the grievance policy and procedures. (Graduate School Policies are available in the Graduate School Student Handbook at: <https://gradschool.uams.edu/students/graduate-school-handbook/>)

Choosing Advisors

- Academic Advisor
 - Student must choose an academic advisor within the department during their first semester in the MSCN program
- Research Advisor
 - A student must choose a research advisor within the department prior to enrolling in NUTR 5104 Nutrition Research & Statistical Methods

Signature Page

- Signature Page
 - Located on the last page of this handbook
 - Students must return the signature page to the Department Chair before the end of their first semester in the MSCN program
 - Students cannot register for the next (second) semester until returning the signature page to the Department Chair

Comprehensive Examination:

The Comprehensive Examination will be scheduled following completion of required core courses. The Advisor and the student will establish eligibility to sit for the examination, and schedule a date for completion. Students cannot complete components of NUTR 5101 or NUTR 5121 (written research or oral defense of research) until after successfully passing the comprehensive examination.

The Academic Advisor will acquire the comprehensive questions from the faculty on record for the required courses as shown below:

Required core courses included on the comprehensive exam:

NUTR 51033 Assessment of Nutritional Status
NUTR 51063 Nutrition and Metabolism: Micronutrients
NUTR 51073 Advanced Clinical Nutrition **OR** DIET 5333 Advanced Clinical Dietetics
NUTR 51103 Nutrition and Metabolism: Macronutrients
NUTR 51133 Nutrition Counseling **OR** Diet 5112 Nutrition Counseling

Duties of the department include:

- The Department Chair will maintain the examination questions in accordance with faculty assigned to teach the courses covered by the examination.

At the exam:

- The examination period will be online and is limited to eight (8) hours unless special accommodations have been documented in advance. The examination period will begin at 8:30AM, and end at 4:30PM.
- Students will be given a list of the examination questions for each of the included courses. The student will select items to be answered as directed.

The Advisor will send the completed answers to the individual faculty members for grading. A grading scale of 0-100 will be used. The advisor will compile the scores as a percentage and assign a Pass/Fail Grade. In order to successfully complete the comprehensive examination, the student must:

- Score greater than or equal to 80% in each course

Graded exams will be returned to the Advisor. The Advisor will notify students regarding their completion status (pass/fail). The Advisor will notify the Graduate School and the Office of the University Registrar upon successful completion of the examination.

Procedures for Retaking a Failed Comprehensive Examination

If any student receives less than 80% in any course, then the student must meet with the instructor of that course to satisfactorily demonstrate competency in that area.

- Should students fail to achieve an overall score equal to or greater than 80%, they will be required to retake the failed course(s) comprehensive examination.
- In the event a student fails to achieve a score equal to or greater than 80% on the retake comprehensive examination section, the student must retake and satisfactorily complete the actual

course(s) and subsequent comprehensive examination to remain eligible to continue degree work. The process described in this bullet is a one-time opportunity.

Suggested Tips on Studying/Writing for The Comprehensive Examination:

1. Save materials from courses covered on the comprehensive examination as you progress through the MSCN program.
2. After establishing a date for the examination, write a study calendar outlining a study plan.
3. The student may contact course instructors for study suggestions, if desired.
4. Prepare written study notes from course syllabi, class notes, and other reference materials. Major concepts need to be identified and categorized with essential elements.
5. Form a study group to review materials orally to assist in developing mock questions and answers.
6. Allow sufficient time to study ahead – Do not wait until the last minute and try to cram it all in overnight.
7. Get a good night’s sleep prior to the examination.
8. Begin the exam with a plan.

Thesis Option:

Requirements:

1. The thesis option consists of 30 credit hours of coursework and six (6) credit hours of thesis credit (NUTR 5123V). The thesis will follow the Graduate School guidelines for a UAMS Thesis. The final product is a thesis submitted to the UAMS Library.

18 credit hrs.	Required core courses
12 credit hrs.	Elective courses
<u>6 credit hrs.</u>	NUTR 5121 Master’s Thesis in Clinical Nutrition
36 credit hrs.	Total Credit Hours

2. Passing a Comprehensive Examination. Please see pages 16-17 of the Policies and Procedures section for details regarding this examination.
3. Writing a successful research proposal. Please see #2 below under Procedures for details regarding the research proposal.
4. Passing the written thesis. Please see #4-9 (in particular, #8) below under Procedures for details regarding the written thesis.
5. Passing the oral presentation and defense of a written thesis. Please see #10 below under Procedures for details regarding the defense presentation.

6. The faculty research committee will consist of a thesis advisor, at least one other committee member from the Department, and at least one other from outside the Department. A minimum of three members must be selected.

Procedures:

The student will obtain guidelines for Thesis Preparation from the Graduate School

(<http://gradschool.uams.edu/students/thesis-and-dissertation-preparation/>) prior to writing the initial proposal. Assessment of NUTR 5121 Master's Thesis in Clinical Nutrition is based on the following scale: Pass (assigned grade of "B" or better); Fail (assigned grade of "C" or lower). Failure will result in dismissal from the MSCN program. Failure with the written thesis or oral defense will also result in dismissal from the MSCN program. Details regarding grading of work are included below; in brief, the research proposal is worth 20% of the final grade; the written thesis is worth 40% of the final grade; and the oral defense is worth 40% of the final grade.

1. After the selection of a research topic, the thesis advisor and student will decide the composition of the thesis committee. Upon agreement, the advisor will forward the appropriate thesis form to the Associate Dean or Dean of the Graduate School for formal approval. (See page 30 for a copy of the Thesis Advisory Committee form – also available at: <http://gradschool.uams.edu/students/forms/>)
2. The student will write a thesis research proposal containing three elements: (1) Introduction & Background, (2) Research Question & Specific Aims with hypothesis (3 max) and (3) Proposed Methods and submit it to the thesis advisor. With approval of the advisor, the student will submit the proposal to the thesis committee. The thesis advisor will provide a scoring rubric. The proposal is worth 20% of the final grade in NUTR 5121. A rating of ≥ 80 is required to move forward with thesis work. A rating of ≤ 79 requires rewriting of the proposal until achieving a rating of ≥ 80 . Continued failure to achieve a rating of ≥ 80 may affect a student's expected date of graduation.
 - Students are required to have a minimum of two committee meetings each year; for example, one meeting per semester).
 - Appropriate deadlines for completion of the thesis research will be outlined by the student and thesis advisor.
3. After review by the thesis advisor (and faculty research committee, if deemed necessary), a human subject research determination form will be submitted to the UAMS (and other appropriate) Institutional Review Board(s) (IRB). If required, a full protocol will be developed, approved by the committee, and submitted for review by the UAMS (and other appropriate) IRBs, this process should be budgeted with approximately 2-months of processing time in determining appropriate timelines of project completion. If the research involves animals rather than humans, the protocol will be submitted to the UAMS Institutional Animal Care and Use Committee.
4. The thesis will be developed using the traditional research outline format as follows:
 - A. Title
 - B. Abstract (formatted according to criteria for a National Meeting)
 - C. Introduction and Objectives
 - D. Literature Review
 - E. Methods
 - F. Results
 - G. Discussion

- H. Limitations
 - I. Conclusion
 - J. Implications for Future Research & Practice
 - K. References
 - L. Appendices, e.g. IRB approval, instruments, graphs and charts displaying results, etc.
5. All thesis chapters must be presented in draft form to the thesis advisor by a specified date determined by the advisor and research committee.
 6. The thesis advisor provides corrections to be made before the student distributes the thesis to the entire committee. Prior to the oral defense, the research committee must receive the written thesis by a specified date determined by the advisor and committee members.
 7. Committee members will email corrections/suggestions prior to the oral defense, or bring the corrections/suggestions to the oral defense (as determined by the thesis advisor and research committee).
 8. A grade for the written thesis will be assigned based on a scoring rubric [pass (assigned grade of “B” or better); pass with corrections or revisions (assigned grade of “B” or better); fail (assigned grade of “C” or lower)]. The thesis advisor will provide a scoring rubric. The written thesis is worth 40% of the final grade in NUTR 5121. In the situation when corrections or revisions are required, the thesis advisor will review the final corrections and, if judged satisfactory by advisor, the thesis will be considered approved for the student to send forward to the UAMS Graduate School and Library. In the situation when the advisor judges the revisions not to be satisfactory, then the entire committee will reconvene, review the revised thesis, make corrections or suggestions, and allow for revision. If the advisor is satisfied with the second revision, the thesis will be considered approved for the student to forward to the UAMS Graduate School and Library. If the advisor is not satisfied, the process may be repeated; if the advisor is not satisfied by the third attempt, the grade status will change to fail. A failing grade on the written thesis will result in failing NUTR 5121.
 9. The written thesis should be submitted to the library **at least ten (10) days before graduation and in compliance with the academic calendar**. One copy of the revised thesis as accepted by the UAMS Library will be given to the Department Chair, the advisor, and any additional faculty research committee members.
 10. The oral defense should be a PowerPoint (or compatible format) presentation between 45-60 minutes in length, followed by an additional period for questions immediately after the oral presentation. After the question/answer period, the thesis committee will meet in closed session to determine the student’s status. The defense process detailed here should take approximately 2 hours. A passing grade for the oral defense is a grade of “B” or better. Students who receive a “C” or lower will have one opportunity to deliver a second oral defense (scheduled in consultation with the advisor and research committee). If the second oral defense results in a grade of “C” or lower, the student fails NUTR 5121 and is dismissed from the MSCN program. The thesis advisor will provide a scoring rubric. The oral defense is worth 40% of the final grade in NUTR 5121.
 11. Upon notification from the advisor that all degree requirements have been met, the Advisor will submit a formal letter or email to the Dean of the Graduate School that the student has satisfactorily completed all degree requirements.

Non-Thesis Option:

Requirements:

1. The non-thesis option consists of 33 credit hours of coursework and three (3) credit hours of research in nutrition (NUTR 5100V). The research project paper will follow the guidelines outlined below. The final product is a written research project report submitted to the Department Chair and faculty research committee members.

18 credit hrs.	Required core courses
15 credit hrs.	Elective courses
<u>3 credit hrs.</u>	NUTR 5101 Research in Nutrition
36 credit hrs.	Total Credit Hours

2. Passing a Comprehensive Examination. Please see pages 16-17 of the Policies and Procedures section for details regarding this examination.
3. Writing a successful research proposal. Please see #2 below under Procedures for details regarding the research proposal.
4. Passing the written non-thesis. Please see #4-9 (in particular, #8) below under Procedures for details regarding the written research paper.
5. Passing the oral presentation and defense of a written research paper. Please see #10 below under Procedures for details regarding the defense presentation.
6. The research committee will consist of a research advisor, and two other committee members from or affiliated with the Department.

Procedures:

Assessment of NUTR 5100V Research in Nutrition is based on the following scale: Pass (assigned grade of “B” or better); Fail (assigned grade of “C” or lower). Failure will result in dismissal from the MSCN program. Failure with the written research paper or oral defense will also result in dismissal from the MSCN program. Details regarding grading of work are included below; in brief, the research proposal is worth 20% of the final grade; the written research paper is worth 40% of the final grade; and the oral defense is worth 40% of the final grade.

1. The research advisor and the student will agree upon a project topic and membership of a research committee.
2. The student will prepare a research proposal containing three chapters (1) Introduction & Background, (2) Research Question & Specific Aims with hypothesis (3 max) and (3) Proposed Methods and submit it to the research advisor. With approval of the advisor, the student will submit the proposal to the research committee. The research advisor will provide a scoring rubric. The proposal is worth 20% of the final grade in NUTR 5100V. A rating of ≥ 80 is required to move forward with non-thesis research work. A rating of ≤ 79 requires rewriting of the proposal until achieving a rating of ≥ 80 . Continued failure to achieve a rating of ≥ 80 may affect a student’s expected date of graduation.

- The research advisor and student will outline appropriate meeting times and deadlines for completion of the non-thesis research. Failure to attend meetings and/or meet deadlines may affect a student's expected date of graduation.
3. After review by the research advisor (and committee, if deemed necessary), a human subject research determination form will be submitted to the UAMS (and other appropriate) IRB(s). If required, a full protocol will be developed and submitted for review by the UAMS (and other appropriate) IRBs. The full IRB review process should be budgeted with approximately 2-months of processing time in determining appropriate timelines of project completion. Animal projects will be submitted to the UAMS Institutional Animal Care and Use Committee.
 4. A written research report will be developed using the traditional research outline format as follows:
 - A. Title
 - B. Abstract (formatted according to criteria for a National Meeting)
 - C. Introduction and Background
 - D. Research Question & Specific Aims with Hypotheses
 - E. Methods
 - F. Results
 - G. Discussion (including strength & limitations)
 - H. Conclusions & Implications for Future Research & Practice
 - I. References
 - J. Appendices, e.g. IRB approval, instruments, graphs and charts displaying results, etc.
 5. The research paper components (as outlined above) must be presented in draft form to the research advisor by a specified date determined by the advisor and research committee.
 6. The research advisor provides corrections to be made before the student distributes the research paper to the entire committee. Prior to the oral defense, the research committee must receive the written research report by a specified date determined by the advisor and committee members.
 7. Committee members will email corrections/suggestions prior to the oral defense, or bring the corrections/suggestions to the oral defense (as determined by the research advisor and research committee).
 8. A grade for the written research paper will be assigned based on a scoring rubric [pass (assigned grade of "B" or better); pass with corrections or revisions (assigned grade of "B" or better); fail (assigned grade of "C" or lower)]. The research advisor will provide a scoring rubric. The written research paper is worth 40% of the final grade in NUTR 5101. In the situation when corrections or revisions are required, the research advisor will set a date, by which, corrections or revisions are due. The advisor will review the final corrections and, if judged satisfactory, the research paper will be considered approved. In the situation when the advisor judges the revisions not to be satisfactory, then the entire committee will reconvene, review the revised research paper, make corrections or suggestions, and allow for revision. If the advisor is satisfied with the second revision, the research paper will be considered approved. If the advisor is not satisfied, the process may be repeated; if the advisor is not satisfied by the third attempt, the grade status will change to fail. A failing grade on the written research paper will result in failing NUTR 5100V.

9. One copy of the final/revised research paper will be given to the Department Chair, the advisor, and any additional faculty research committee members.
10. The oral defense should be a PowerPoint (or compatible format) presentation between 45-60 minutes in length, followed by an additional period for questions immediately after the oral presentation. After the question/answer period, the research committee will meet in closed session to determine the student's status. The defense process detailed here should take approximately 2 hours. A passing grade for the oral defense is a grade of "B" or better. Students who receive a "C" or lower will have one opportunity to deliver a second oral defense (scheduled in consultation with the advisor and research committee). If the second oral defense results in a grade of "C" or lower, the student fails NUTR 5101 and is dismissed from the MSCN program. The thesis advisor will provide a scoring rubric. The oral defense is worth 40% of the final grade in NUTR 5100V.
11. Upon notification from the advisor that all degree requirements have been met, the Advisor will submit a formal letter or email to the Associate Dean of the Graduate School that the student has satisfactorily completed all degree requirements.

Suggested Tips on Planning a Thesis or Non-Thesis (Research in Nutrition) Project

[Available at the back of the handbook (page 29) as a checklist page to help keep you on track]

1. Identify a faculty member with whom you wish to do a thesis or non-thesis research project. You may want to have preliminary meetings with several before selecting one.
2. Once a general topic has been identified, do at least a preliminary literature search.
3. Meet with the thesis/non-thesis research project advisor and identify potential committee members.
4. Invite appropriate number of faculty members to serve on your thesis or non-thesis research project committee. Orally discuss the project with each individual. (Non-thesis a minimum of 3 from the department and for the thesis a minimum of 2 from inside the department and 1 from outside the department.)
5. Once a faculty person verbally agrees to serve on your committee, follow up with a formal written letter (as an email attachment) with a title and brief description of your project.
6. Establish a first preliminary meeting of your committee to acquaint them with each other and with your project.
7. At the first meeting have a preliminary sketch of your idea(s) and ask for their input. A written research question(s) and a tentative timeline will enrich the discussion and make the meeting more productive. Outside faculty may bring a fresh and different approach than you and your advisor had first considered. They may advise against the project or suggest a more realistic project.
8. Decide on the next meeting and dates/times for getting materials to your committee members.
9. Follow-up with their suggestions.
10. Meet all IRB and CLARA requirements.
11. Begin data collection when formal approval is received.
12. Meet with your advisor over the preliminary data. Then set up a committee meeting.

13. Make time commitments and appointments with the committee and KEEP them.
14. Write, review, rewrite, and review until committee members are satisfied. Several revisions may be necessary.
15. With advisor and other committee members, establish a date for defense.
16. The advisor will provide the full committee with a final draft of thesis/paper (approved by the advisor) within at least 4 weeks prior to the graduate school deadline for reporting final grades.
17. Be prepared to make final revision(s) after defense.
18. Submit to the library (thesis) or to advisor for final paper (Non-thesis Option).
19. Distribute final revised copies to the advisor and other committee members as well as one for the Department permanent files.
20. **CELEBRATE!!!!**

Judy Waller Travel Award for MSCN students:

Procedure:

1. The student must write an abstract of their research project in MSCN program according to the abstract requirements for one of the national meetings such as American Society for Nutrition (ASN) or the Food and Nutrition Conference and Expo (FNCE). The student must submit an abstract within 12 months after graduation.
2. Research Advisor or Department Chair will submit student abstracts to the national meeting. Research Advisor or a faculty member must be a member of the society to which the student abstracts will be submitted.
3. Department will pay the abstract submission fee.
4. Students are encouraged to apply for/receive additional external travel awards as applicable to the chosen conference.
5. After the student's abstract receives acceptance as an oral or poster presentation, the student will apply for the Judy Waller Travel Award up to **\$750.00** (depending on availability of funds) to attend the meeting (toward allowable costs). [Judy Waller Travel Award Application | College of Health Professions \(uams.edu\)](https://uams.edu/college-of-health-professions/judy-waller-travel-award-application)
6. The Department Chair will notify the students about the status of their award.
7. The student must work with the department's executive assistant to apply for early meeting registration as "Non-member Graduate student" for the ASN meeting. If attending the Academy of Nutrition and Dietetics (FNCE) meeting the student must select the student-member rate if still a student. If the registrant is a program graduate, they must select the member rate. Registration for other research conferences to be discussed with your research advisor. A receipt of paid registration fee must be sent to the department's executive assistant upon completion of registration. Late registration is not allowed.
8. The student should finalize the poster or oral presentation with the advisor at least six weeks before the presentation at the national meeting. It is the responsibility of the student to follow an appropriate timeline set in discussion with the research advisor.
9. Advisor will send a copy of previous student poster presentation to the student to use as example.
10. The Department will pay for printing of the poster.

11. The student will make their own transportation and hotel reservations and pay for, travel/transportation, hotel and meals – itemized receipts must be kept (please review UAMS travel policy for allowable costs for reimbursement).
12. **After attending and presenting the presentation at the national meeting**, the student will submit **copies** of all meeting-related receipts (registration fee, airfare, hotel, meals and transportation) to the department’s executive assistant. The student will receive a reimbursement of up to **\$750.00** for the trip (toward allowable costs).
13. Student must acknowledge support by the Judy Waller Travel Award at their poster or oral presentation. Please use “This student research was supported by the Judy Waller Travel Award” acknowledging this support on your poster/presentation.

Evaluations:

Instructor and Course Evaluations:

At the end of each semester, you will be strongly encouraged to evaluate the course and the instructor online through Blackboard. A standard evaluation form will be used to document faculty performance and course effectiveness. You will be able to provide written comments on the evaluation. In addition, some instructors may ask you to do interim feedback either verbally or in writing. Additionally, you may be asked to provide an annual program survey, even after you graduate.

MSCN Degree Program Evaluation:

Toward continuously improving the MSCN degree program, you will be asked to provide constructive feedback throughout your graduate study and after graduation. Alumni can serve to maintain high standards and strengthen the future program by evaluating practice needs, recruiting future students, and financially supporting the program through gifts and memorials that provide discretionary funds so essential to quality programs.

Recent publications from former MSCN students (student’s name in bold)

Peer-reviewed papers:

Arthur C, Phelps J, Hakkak R. 2021. Examining weight gain: A retrospective study on preterm newborn growth on a diet exclusively of fortified donor breast milk. *International Journal of Functional Nutrition*. 2(3). <https://doi.org/10.3892/ijfn.2021.13>.

Hakkak R, **Bell, A** and S Korourian. Dehydroepiandrosterone (DHEA) Feeding Protects Liver Steatosis in Obese Breast Cancer Rat Model. *Sci. Pharm.* 2017,85,13; DOI:10.3390/scipharm85010013

Bell, A., Korourian, S., Zeng, H., Phelps, J., Hakkak, R. 2017. A Diet Containing a High- Versus Low-Daidzein Level Does Not Protect Against Liver Steatosis in the Obese Zucker Rat Model. *Food & Function*. DOI: 10.1039/c6fo01772j

Jousheghany F, Phelps J, Crook T and R Hakkak. Relationship Between Level of HbA1C and Breast Cancer. *BBA Clinical*, 2016;45-48. DOI: 10.1016/j.bbacli.2016.04.005.

Foster L, Allan M, Khan A, Moore P, Williams D, Hubbard M, Dixon L, Gurley B. Multiple Dosing of Ephedra-Free Dietary Supplements: Hemodynamic, Electrocardiographic, and Bacterial Contamination Effects. *Clinical Pharmacology & Therapeutics*, 2013; 93:267-274. doi:10.1038/clpt.2012.241.

Filla C, Hays N, Gonzales D and R Hakkak. Self-Reported Changes in Weight, Food Intake, and Physical Activity from High School to College. *J Nutr Disorders Ther*, 2013; 3:129. doi 10.4172/2161.0509.1000129

Hamlin J, Pauly M, Schmidt B, Melnyk S, Pavliv O, Starrett W, Crook T, James J. Dietary Intake and Plasma Levels of Choline and Betaine in Children with Autism Spectrum Disorders. *Journal of Autism Research and Treatment*, 2013, doi:10.1155/2013/578429.

Prins A, Gonzales D, Crook T and Hakkak R. Impact of Menu Labeling on Food Choices of Southern Undergraduate Students. *J Obes & Wt Loss Ther*, 2012; S4-001. doi: 10.4172/2165-7904.S4-001.

Moore E, Crook T, James J, Gonzales D, and Hakkak R. Nutrient Intake among Children with Autism. *Journal of Nutritional Disorders & Therapy*, 2012; 2:115. doi:10.4172/2161-0509.1000115

Peer-reviewed Abstracts 2023

1. **Cothorn C**, Fose C, Hakkak R, Li W, Jansen L. The Effect of Adding a Registered Dietitian to the Interdisciplinary Team on Malnutrition Diagnosis and Nutrition Care in Long-Term Care Residents. *Current Developments in Nutrition*. 2023;7:101140.
2. **Henson A**, Phelps J, Li W, Hakkak R. Rate and Accuracy of Coded Malnutrition Diagnosis Among Hospitalized Adult Patients Following Implementation of a Malnutrition Quality Improvement Initiative Program. *Current Developments in Nutrition*. 2023;7:100744.
3. **Gurley P**, Li W, Fose C, Hakkak R, Jansen L. Impact of a PharmD, MSCN Guided Educational Intervention on Knowledge of Nutrition & Dietary Supplement Use in Baseball and Softball Athletes at an NCAA Division II Program. *Current Developments in Nutrition*. 2023;7:100747.
4. **Schipper A**, Phelps J, Li W, Hakkak R. Interruptions for Enteral Nutrition Provision in Critically Ill Patients. *Current Developments in Nutrition*. 2023;7:101155.
5. **Smith A**, Phelps J, Li W, Fose C. Rate of Oral Mucositis, Hospital Length of Stay, and Nutrition Interventions Used in Pediatric Patients Receiving Cancer Therapies at a Public Pediatric Hospital. *Current Developments in Nutrition*. 2023;7:101048.
6. **Webb H**, Phelps J, Li W, Fose C. P04-014-23 Nutrition Education & Culinary Training Among Hospital Foodservice Workers. *Current Developments in Nutrition*. 2023;7:100752.
7. **Welker M**, Phelps J, Li W, Fose C. P04-015-23 Investigating Effectiveness of Online Learning of Nutrition Education to Interprofessional Students Volunteering at a Student Run Free Clinic. *Current Developments in Nutrition*. 2023;7:100753.

Peer-reviewed Abstracts 2021

1. Arthur A, **Sonaty G**, Phelps J, Parker P. Exploring Effectiveness of Online Nutrition-Related Diabetes Education Training for Interdisciplinary Healthcare Students at a Student-Run Free Clinic. *Current*

Peer-reviewed Abstracts 2020

1. **O'Malley E**, Phelps J, Arthur C, Hakkak R. Investigating Effectiveness of a Pritikin-Based Cardiac Rehabilitation Program on Patients with Heart Disease. *Current Developments in Nutrition*, Volume 4, Issue Supplement_2, June 2020, Page 58, https://doi.org/10.1093/cdn/nzaa040_058.
2. **Gatliff R**, Phelps J, Arthur C, Andres A. Examination of Prenatal Dietary Choline Intake, and Maternal and Infant Outcomes. *Current Developments in Nutrition*, Volume 4, Issue Supplement_2, June 2020, Page 993, https://doi.org/10.1093/cdn/nzaa054_065.
3. **Spencer S**, Arthur A, Phelps J, Hakkak R. A Tele-Visit Nutrition Intervention Promoting Consumption of Healthy Foods and Beverages Among Adolescents Attending Rural Public Schools. *Current Developments in Nutrition*, Volume 4, Issue Supplement_2, June 2020, Page 1350, https://doi.org/10.1093/cdn/nzaa059_067.

Peer-reviewed Abstracts 2019

1. **Montelongo J**, Phelps J, Maddox T, Hakkak R. Determining Effectiveness of Diabetes Education Program for Management of Type 1 and Type 2 Diabetes in a Pediatric Population. *J Acad Nutr Diet*. 2019 (Suppl 1), 119(9): A51. [*Won Outstanding Abstract Award at the FNCE 2019 Annual Conference.*]
2. **Hinsley J**, Phelps J, Maddox T, Swindle T, Ward W. Best Practices in Sensory-based Food Play Therapy: An Investigation to Establish a Standardized Intervention for Improving Food Acceptance Among Preschool-aged Children. *Curr Dev Nutr*. 2019 June;3(1) nzz050.P16-042-19, <https://doi.org/10.1093/cdn/nzz050.P16-042-19>.
3. **Shaw C**, Phelps J, Arthur C, Maddox T. A Retrospective Look at TPN with Pancreatitis: Do Recommendations Match Guidelines? *Curr Dev Nutr*. 2019 June;3(1) nzz035.P12-036-19, <https://doi.org/10.1093/cdn/nzz035.P12-036-19>.

Peer-reviewed Abstracts 2018

1. **Queen L**, Phelps J, Rodibaugh R, Maddox T. Food Demonstrations Using Ingredients from Non-Traditional Grocery Stores. *J Acad Nutr Diet*. 2018 (Suppl 1), 118(9):A41.
2. **Carter M**, Crook T, Phelps J, Hakkak R. Assessing the Effectiveness of a Training Video on Nutrition Knowledge and Confidence in Food Pantry Volunteers. *Curr Dev Nutr*. 2018 Nov 1;2(11) <https://doi.org/10.1093/cdn/nzy036>.
3. **McIntyre K**, Phelps J, Rodibaugh R, Crook T. Evaluation of a Practice-Based Health Curriculum Implemented in Faith-Based Settings. *Curr Dev Nutr*. 2018 Nov1;2(11) <https://doi.org/10.1093/cdn/nzy033>.
4. **Parker K**, Phelps J, Crook T, Jung SE, Hakkak R, Parker S. Relations between Food Insecurity and Self-Esteem among a Sample of SNAP Recipients. *Curr Dev Nutr*. 2018 Nov1;2(11) <https://doi.org/10.1093/cdn/nzy033>.

5. **Arthur C**, Phelps J, Crook T, Hakkak R. A Retrospective Look at Milk Laboratory Data for the Purpose of Identifying Future Avenues for Data Collection and Research. *Curr Dev Nutr*. 2018 Nov1;2(11) <https://doi.org/10.1093/cdn/nzy040>.

Peer-reviewed Abstracts 2017

1. **Tennyson M**, Phelps J, Crook T, McKelvey K. Effects of Video Modeling Intervention on the Dietary Habits of Patients with Down Syndrome. *J Acad Nutr Diet*. 2017 117(9 Supplemental):A23.
2. **McClafferty S**, Phelps J, Crook T, Hakkak R. Associations Between Iron Intake and Hemoglobin Levels in Older Adults. *J Acad Nutr Diet*. 2017 117(9 Supplemental):A52.
3. **Bell A**, Korourian S, Zeng H, Phelps J, Crook T, Gurley B, Feresin R, Hakkak R. The Effects of a High- and Low-Daidzein Diet on Liver Steatosis and Serum Adipokines in Female Obese Zucker Rats. *FASEB J*; 2017 31:793.1.
4. **Bauerlein D**, Phelps J, Crook T, Hakkak R. Exploring Diabetes Care-Related Outcomes in Arkansas Healthcare Systems for Young Old (Ages 65–74) and Old (Ages 75–84) Age Groups. *FASEB J*; 2017 31:648.9.

Peer-reviewed Abstracts 2016

1. Hakkak R, **Bell A**, Korourian S. Effects of Obesity and Soy Protein Diet on Feed Intake and Serum Leptin Level in Female Zucker Rats. *FASEB J* 2016; 915.30.
2. **Hurlimann T**, Phelps J, Crook T and Hakkak R. Current Nutrition Screening & Assessment Practices in Use According to Members of the Texas and Arkansas Academy of Nutrition and Dietetics. *FASEB J* 2016; 30:675.12.
3. **Rhodes K**, Crook T, Phelps J and Hakkak R. Effect of Food Allergies on Growth in Children. *FASEB J* 2016; 30:671.13.
4. **Delavan L**, Crook T, Phelps J and Hakkak R. Associations between Weight-Related Variables, Gender, and Age in Overweight and Obese Preadolescents and Adolescents. *FASEB J* 2016; 30:687.1.

Suggested Tips on Planning a Thesis or Non-thesis (Research in Nutrition) Project:

Item	Date	Completed
1. Identify a faculty member with whom you wish to do a thesis or non-thesis research project. You may want to have preliminary meetings with several before selecting one.		
2. Once a general topic has been identified, do at least a preliminary literature search.		
3. Meet with the thesis/non-thesis advisor and identify potential committee members.		
4. Invite appropriate number of faculty members to serve on your thesis or non-thesis research committee. Orally discuss the project with each individual. (Non-thesis a minimum of 3 from the department and for the thesis a minimum of 2 from inside the department and 1 from outside the department.)		
5. Once a faculty person verbally agrees to serve, follow up with a formal written letter with a title and brief description of your project.		
6. Establish a first preliminary meeting of your committee to acquaint them with each other and with your project.		
7. At the first meeting <i>have a preliminary sketch of your idea(s)</i> and ask for their input. A written question(s) and a tentative timeline will enrich the discussion and make the meeting more productive. Outside faculty may bring a fresh and different approach than you and your advisor had first considered. They may advise against the project or suggest a more realistic project.		
8. Decide on the next meeting and dates/times for getting materials to your committee members.		
9. Follow-up with their suggestions.		
10. Meet all IRB and CLARA requirements.		
11. Begin data collection when formal IRB approval is received.		

12. Meet with your research advisor over the preliminary data. Then set up a committee meeting.		
13. Make commitments to the committee and KEEP them.		
14. Write, review, rewrite, and review until committee members are satisfied. Several revisions may be necessary.		
15. With advisor and other committee members, establish a date for defense.		
16. Provide the full committee with final draft of thesis/paper approved by the research advisor within at least 4 weeks prior to the graduate school deadline for reporting final grades.		
17. Be prepared to make final revision(s) after defense.		
18. Submit to the library (thesis) or to advisor for Final paper (Non-thesis Option).		
19. Distribute final revised copies to the advisor and other committee members as well as one for the Department Permanent files.		
20. CELEBRATE!!!!		

Student Signature _____