
Health Sciences

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Master of Occupational Therapy Program

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Overview

The Department of Health Sciences is home to three graduate programs: M.S. in Health Sciences with a concentration in either Dietetics or Nutrition and Physical Activity; M.O.T. in Occupational Therapy; M.P.A.S. in Physician Assistant Studies. The Department also offers a Health Services Administration track in the M.B.A. program.

Admission Requirements

Admission requirements for programs in the Department of Health Sciences vary by program. Refer to the specific program for admission criteria and deadlines.

Mission

The graduate programs in health sciences are dedicated to preparing students to become evidence-based critical thinkers in the health sciences. Specifically, these programs build upon the undergraduate health sciences programs by providing a more detailed knowledge base that is fortified by self-directed learning experiences and the development of practical, clinical and/or research skills.

Goals

The specific goals of the graduate programs in health sciences are designed to help students develop their critical thinking abilities while expanding their knowledge in the rapidly changing health-related environments. Specifically, students will be able to:

- critically evaluate the current research in the ever-broadening field of health.
- access current literature in the health fields.
- interpret current health-related research.
- develop basic research skills.
- describe and evaluate various health education models.
- critically evaluate past and present health care administration strategies.

The mission and goals are based, in part, on the Standards for the Preparation of Graduate-Level Health Educators.

In the Master of Science programs, courses must be selected with the approval of the major adviser in accordance with the purposes of the student. Students electing a major in the health sciences department are expected to have adequate undergraduate preparation in the chosen area of graduate study and satisfactory Graduate Record Examination scores.

Students entering the Dietetics and Nutrition and Physical Activity concentrations of the health sciences graduate program who do not possess entry-level dietetics competencies will be required to obtain these competencies with course work and assignments determined to meet the need as prerequisites of the program. Some undergraduate courses may be taken concurrently with graduate work.

Master of Science Concentrations

Health Sciences: Dietetics Concentration

Dr. Tammy Wagner, Graduate Concentration Coordinator

Phone: (540) 568-6570

A Master of Science degree in Health Sciences may be pursued with a concentration in dietetics. The program includes course work in advanced nutritional biochemistry, applied nutrition and research methods. Students must plan, conduct and publish a research project. Students who want to study in the area of nutrition, but have a limited background, will need to fulfill prerequisite requirements in nutrition, organic chemistry, biochemistry and statistics prior to full admission to the program.

Health Sciences: Combined Master of Science/Dietetic Internship Program (MS/DI)

The mission of the Dietetic Internship at James Madison University is to provide a six-month supervised dietetic experience to qualified students in the Master of Science program in health sciences: dietetics in order for them to achieve the competence of entry-level dietitians and the ability to apply current research findings to dietetics practice.

This program includes graduate education as outlined above and supervised practice experience to provide the skills necessary for professional practice in dietetics. Students will acquire new knowledge through course work and research and will apply that advanced knowledge to dietetic practice in a supervised setting. An advanced, in-depth education in nutrition enhanced by developing research and problem-solving skills will enable graduates to enter the profession at a higher level of function.

Students with a Bachelor of Science degree in nutrition or a related field who meet American Dietetic Association (ADA) Didactic Program in Dietetics (DPD) requirements are eligible for admission to the combined MS/DI program. Students with a B.S. in a related field may have appropriate background for graduate study in nutrition. However, it is necessary to complete all requirements of a DPD prior to application to the DI. The department has a CADE-accredited undergraduate program to facilitate completion of DPD requirements. Certain courses may be taken at the graduate level to meet these requirements.

The MS/DI at James Madison University is accredited by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association. The James Madison University Dietetic Internship participates in a preselection process in addition to the computer matching process. In the preselection process, the program can select three current graduate students per year who have met the internship admission requirements. The remaining number of positions will be filled through the computer matching process. For those who plan to participate in the preselection process, January 13 is the postmark deadline for applications. The applicant will be notified on or before February 1 confirming their acceptance status through the preselection process. By February 1, the Program Director will provide D&D Digital Systems Inc. the name and social security numbers of all preselected applicants to ensure that these individuals do not participate in the computer match.

If the applicant is not selected through the preselect process, they may reapply to the James Madison University DI or any other DI through the computer matching process. The deadline for submission of applications to DI programs and submission of the computer matching mark/sense cards and fee to D&D Digital Systems Inc. for the April computer match is February 15.

Questions about accreditation can be directed to:

CADE
216 W. Jackson Blvd.
Chicago, IL 60606-6995
(312) 899-4876

The MS/DI program is designed so that students take a full credit load (9 hours) of classes during the first year on the JMU campus prior to the dietetic internship rotations. All M.S. degree requirements, including prerequisite courses, research and the comprehensive exam, must be successfully completed prior to the start of the internship rotations.

The dietetic internship involves six months of supervised practice in clinical nutrition, community nutrition and food service management. Rotations are completed at one of four practice sites which are at varying distances from the James Madison University campus. Upon completion of the supervised practice competencies and all requirements for the M.S. degree, graduates will receive a signed Verification Statement and may apply for eligibility to take the Registration Examination for Dietitians.

Application Procedure

IMPORTANT: Contact the Dietetic Internship Director prior to submitting an application. Students will apply to the Dietetic Internship and the Master of Science program in health sciences (concentration in dietetics) at the same time. All required materials must be submitted by the deadline. Incomplete applications will not be considered.

To be considered for the combined MS/DI program, complete applications (both parts) must be received by February 15.

Graduate Applications

Students should apply to The Graduate School online at <http://www.jmu.edu/grad>. Sealed transcripts of all previous college and university work should be sent directly to The Graduate School. **IMPORTANT:** Contact the graduate coordinator prior to submitting an application.

Application materials for graduate admission must be sent to:

The Graduate School
MSC 6702, James Madison University
Harrisonburg, VA 22807

A complete graduate application includes:

- JMU Graduate School application (to be completed online).
- An official transcript in sealed envelope from EVERY college or university attended.
- Official results of the Graduate Record Examination (GRE) sent directly from the testing agency.
- Three letters of recommendation addressing the ability to successfully complete a graduate program. Letters must be in a sealed envelope with the signature of the author across the back flap.

THE DIETETIC INTERNSHIP APPLICATION packet must be postmarked by February 15 and sent to:

Dr. Cynthia Cadieux
Department of Health Sciences, MSC 4301
James Madison University
Harrisonburg, VA 22807

Applications are also available at the department Web site.

A complete DI application packet must contain the following items:

- Completed dietetic internship application.
- Signed DPD Verification Statement or Intent to Complete form.
- A typewritten statement of educational objectives and professional goals (two double-spaced pages maximum).
- Three letters of recommendation which include the ADA standard recommendation form AND a separate statement of the applicant's suitability for graduate study. Letters must be in a sealed envelope with the signature of the author across the back flap.
- An official transcript in sealed envelope from EVERY college or university attended.
- A photocopy of official GRE scores (official results of the GRE must be sent directly to the JMU Graduate School).

- A \$30.00 check made payable to James Madison University.

Incomplete applications will not be considered.

All applicants must participate in computer matching through D&D Digital Systems. Applicants should obtain instructions and a mark/sense card to prioritize their internship preferences from their DPD Director or D&D Digital. This request should be made far enough in advance to allow turn around time for submitting by the February 15 postmark deadline. D&D Digital charges a fee for computer matching that is due with the applicant's prioritized ranking. Address requests to:

D&D Digital Systems
304 Main Street, Suite 301
Ames, IA 50010-6148

Minimum requirements for admission to the M.S./Dietetic Internship program are a 2.8 overall GPA, a 3.0 GPA in major courses, plus a combined minimum score of 800 with a 3.5 in analytical writing on the GRE. Information about the GRE may be obtained from:

Educational Testing Service
Box 1025
Berkeley, CA 94701

or

Box 592
Princeton, NJ 08540

Dietetics Concentration Degree Requirements

Minimum Requirements	Credit Hours
NUTR 660. Research Techniques/Research Methods in Dietetics ¹	3
MATH 522. Statistics for Researchers ²	3
NUTR 655. Integrated Nutrition ¹	3
NUTR 654. Current Topics in Foods ²	3
Choose one of the following options:	6-7
Nonthesis option:	
NUTR 681. Directed Research in Dietetics I (two credits)	
NUTR 682. Directed Research in Dietetics II (two credits)	
NUTR 695. Seminar/Research Interpretation in Dietetics (one credit, twice)	
Thesis option:	
HTH 700. Thesis (six credits)	
NUTR 695. Seminar/Research Interpretation in Dietetics (one credit)	
Choose one of the following options:	12
Noninternship option (choose four of the following):	
NUTR 545. Exercise and Nutrition ²	
NUTR 555. Theories and Practices of Weight Management ²	
NUTR 650. Nutrition Education/Counseling ^{3,4}	
NUTR 652. Nutrition Assessment ^{1,4}	
Elective (adviser approval required)	
Internship option:	
NUTR 650. Nutrition Education/Counseling ³	
NUTR 651. Medical Dietetics Practicum	
NUTR 652. Nutrition Assessment ¹	
NUTR 656. Food Systems Management Practicum	
Elective to be selected by all students in program (adviser approval required)	3

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¹ Fall only. ² Spring only. ³ Summer only. ⁴ Registered dietitians may petition to waive taking NUTR 650 and/or NUTR 652 and select one or two additional elective courses as replacements.

Health Sciences: Interdisciplinary Program in Nutrition and Physical Activity

This 33 credit hour master's program permits students to major in health sciences or kinesiology with a concentration in nutrition and physical activity. Students must declare a major in either health sciences or kinesiology with a concentration in nutrition and physical activity. This graduate program has been planned for registered dietitians or persons with an undergraduate degree in dietetics, kinesiology or a related area. This program is designed for the student who has an interest in nutrition and its role in physical activity.

An undergraduate degree with a major in dietetics, kinesiology or a related field is required. Courses in nutrition, exercise physiology, anatomy and physiology are prerequisites for admission to the program. Students should also check the prerequisites listed in the catalog for each course required. Thirty-three hours are required for the degree program, including a thesis or directed research on a selected topic in nutrition and physical activity. The degree program can be completed in as few as two academic years, with a maximum of six academic years. This program does not lead to the RD status recognized by the American Dietetic Association; however, students are encouraged to obtain the RD status by completing the Didactic Program in Dietetics requirements, completing NUTR 650. Nutrition Education and Counseling, and competing for entry into the dietetic internship (NUTR 651 and NUTR 656), an additional nine credits. A list of DPD requirements is available from the undergraduate coordinator of the dietetics program.

Interdisciplinary Program in Nutrition and Physical Activity Concentration Degree Requirements

Minimum Requirements	Credit Hours
NUTR/KIN 555. Theories and Practices of Weight Management ²	3
KIN 644. Metabolic and Cardiorespiratory Aspects of Exercise	3
KIN 645. Muscular, Hormonal and Environmental Aspects of Exercise ¹	3
KIN 650. Exercise Testing, Prescription and Evaluation ²	3
NUTR 660/KIN 655. Research Techniques ¹	3
MATH 522. Statistics ²	3
NUTR 545. Nutrition and Exercise ²	3
NUTR 652. Nutrition Assessment ¹	3
Choose one of the following:	3
NUTR 582. Nutrition and Metabolism ¹	
NUTR 655. Integrated Nutrition ¹	
Choose one of the following:	6
HTH/KIN 700. Thesis	
NUTR 681, 682, 695. Directed Research in Dietetics I-II and Seminar and Research in Dietetics	

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¹ Fall only. ² Spring only.

Master of Business Administration: Health Services Administration Concentration

The Department of Health Sciences cooperates with the College of Business Master of Business Administration program to offer a health services administration concentration within the Master of Business Administration program. This program is intended to provide practicing health professionals with the business skills and health systems knowledge necessary for promotion or to take advantage of new opportunities.

This track includes the following four courses:

- HTH 659. Health Care Environment (3 credits)
- HTH 660. Health Economics (3 credits)
- HTH 661. Financial Management of Health Services Organizations (3 credits)
- HTH 669. Health Care Administration (3 credits)

Three of these courses are used to meet Master of Business Administration elective requirements. Students in the health services administration concentration take HTH 661, Financial Management of Health Services Organizations, instead of FIN 655, Advanced Topics in Financial Management.

Students who have not had at least two years of work experience in a health services organization will be required to complete a three-month internship. Application for admission must be made to the College of Business Master of Business Administration program. Applicants must meet the Master of Business Administration prerequisite requirements. Refer to the Master of Business Administration Web site (<http://cob.jmu.edu/mba>) for specific requirements for this concentration.

Course Offerings

Health Sciences

HTH 501. Workshop in Health and Nutrition. 1-3 credits.

An intensive investigation of a major current health problem such as sex education, drug abuse or environmental health.

HTH 510. Human Sexuality. 3 credits.

Components of human sexuality as they relate to the physical, social and emotional health of children, adolescents and adults. Such topics as physical and sexual changes during adolescence, abortions and contraceptives are discussed.

HTH 549. Contemporary Health Issues. 3 credits.

An investigation of concerns in the area of health promotion, including cardiovascular health, fitness, the personal role of health education, drugs and drug abuse, and other selected topics.

HTH 552. Health Behavior: Theory, Research and Practice. 3 credits.

An in-depth analysis of health education strategies employed in altering individual and community health behavior.

HTH 558. Health Planning. 3 credits.

An intensive exploration of resources and techniques employed in planning and evaluating health programs designed to meet the specific health needs of communities and groups.

HTH 645. Practicum in Health Sciences. 1-3 credits.

Selected practicum experiences for students in the various health sciences graduate programs.

HTH 655. Research Techniques. 3 credits.

This course examines: the focus of research, literature review, research design, choices of method of analysis, data collection techniques and the various ways to conclude a research effort. The logic of statistical analysis is used to develop research designs. *Prerequisite: One statistics course.*

HTH 657. Chronic Diseases. 3 credits.

Survey of common chronic diseases of humanity with emphasis on prevention and early diagnosis. Topics include such diseases as cardiovascular, endocrine, ophthalmic, respiratory and neurological disorders.

HTH 659. Health Care Environment. 3 credits.

This is a survey course examining the U.S. health care system, federal and state health policy, and public and private providers. Comparisons of the U.S. system will be made with other systems in the industrialized world.

HTH 660. Health Economics. 3 credits.

Course explores economic dimensions of the health care delivery system: demand, demand-related human behaviors, competitive markets, economic models for care delivery, regulation and medical insurance. Delivery models of other industrialized nations are considered, as is how the U.S. system may be improved. *Prerequisite: Undergraduate microeconomics.*

HTH 661. Financial Management of Health Services Organizations. 3 credits.

This course emphasizes financial management in a variety of health care organizations. Activities include the study of patient accounting, third party reimbursement and cost reporting. There will be extensive use of microcomputer spreadsheet methods. *Prerequisites: Required: HTH 659; recommended: FIN 645.*

HTH 669. Modern Health Care Administration. 3 credits.

Study of health organizations' internal operations through examination of activities in various health agency settings.

HTH 671. School Health Practice. 3 credits.

Analysis of two areas of the school health program (health services and health instruction) with emphasis on planning, implementing and evaluating health services and instruction.

HTH 680. Reading and Research. 3 credits.

Directed reading in designated areas of specialized interest. Investigating, researching and reporting. Course may be repeated for credit, with permission of the department head, when content changes.

HTH 685. Field Work in Health. 3-6 credits.

Practical experience in applying health theory to problems encountered in a professional setting. Specific assignments will be determined by the needs of the student. (Amount of credit will be based on amount of experience acquired. No more than six hours can be counted toward a degree program.)

HTH 695. Directed Research. 3 credits.

This is for research designed to complete the Directed Research Option. The course must be taken twice. *Prerequisite: Permission of graduate coordinator.*

HTH 698. Comprehensive Continuance. 1 credit.

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

HTH 699. Thesis Continuance. 2 credits.

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

HTH 700. Thesis. 6 credits.

This course is graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisite: HTH 655 or equivalent.*

Dietetics

NUTR 545. Nutrition and Exercise. 3 credits.

Addresses the relationship of nutrition and exercise and the effect of dietary intake. Techniques of nutritional assessment and counseling through dietary plans will be investigated. This course is designed especially for professionals who may be employed in physical fitness programs. *Prerequisite: NUTR 280 or equivalent.*

NUTR/KIN 555. Theories and Practices of Weight Management. 3 credits.

An examination of the physiological, psychological and environmental theories of obesity. Current trends in obesity research are examined. A case study and laboratories are utilized to provide students with practical experience in conducting a weight loss program. *Prerequisites: BIO 270, BIO 290, NUTR 280 or permission of instructor.*

NUTR 582. Nutrition and Metabolism. 3 credits.

A study of the nutrients, their roles in intermediary metabolism, the effects of genetic errors in metabolism, nutritional deficiencies and means of assessing nutritional status. Agencies and programs concerned with nutrition and health and current trends in nutrition research are emphasized. The development of an individual nutrition research project, collection and reporting of data is required. *Prerequisites: NUTR 280, physiology, biochemistry and statistics.*

NUTR 650. Nutrition Education and Counseling. 3 credits.

Review of philosophy and provisions of major nutrition education of current research in the field of dietetics. Techniques of planning, implementing and evaluating programs. Theories and techniques of nutrition counseling. Nutrition education and counseling experience will be provided in a variety of settings. *Prerequisite: NUTR 384 or equivalent.*

NUTR 651. Medical Dietetics Practicum. 3 credits.

The application of nutritional care to a variety of medical situations in a health-care setting. This is a six-month off-campus practicum in a clinical setting taken simultaneously with NUTR 656. Course will be graded on an S/U basis. *Prerequisite: Admittance into the dietetic internship.*

NUTR 652. Nutrition Assessment. 3 credits.

Methods of assessing nutritional status of people in clinical and experimental settings. *Prerequisite: NUTR 384 or equivalent.*

NUTR 654. Current Topics in Foods. 3 credits.

In-depth study of a variety of current topics related to the United States and global food supply, food processing, food regulation, food marketing, and the relationship between foods and disease. *Prerequisite: NUTR 446 or equivalent.*

NUTR 655. Integrated Nutrition. 3 credits.

The biochemical and physiological processes involved in nourishing the body in health and in disease. *Prerequisite: NUTR 482 or NUTR 582.*

NUTR 656. Food Systems Management Practicum. 3 credits.

Food systems management in menu development, equipment and food procurement, cost control, food production and service, and personnel management. A six-month off-campus practicum in a clinical setting taken simultaneously with NUTR 651. Course will be graded on an S/U basis. *Prerequisite: Admittance into the dietetic internship.*

NUTR 660. Research Methods in Dietetics. 3 credits.

This course emphasizes skills in the initiation, conduct and interpretation of research, particularly that involving social science techniques applied to dietetics and health sciences. Emphasis is given to measurement issues, design, questionnaire development, survey techniques, field research, evaluation, quantitative (using SPSS) and qualitative analysis, and ethical issues. *Prerequisite: Undergraduate or graduate-level statistics course.*

NUTR 681. Directed Research in Dietetics I. 2 credits.

Advanced research in dietetics directed by a graduate advisory committee. Course will be graded on an S/U basis. *Prerequisites: Unconditional admission status in the graduate program and HTH 655.*

NUTR 682. Directed Research in Dietetics II. 2 credits.

Advanced research in dietetics research directed by a graduate advisory committee. Course will be graded on an S/U basis. *Prerequisites: NUTR 681.*

NUTR 695. Seminar and Research Interpretation in Dietetics. 1 credit.

Critical evaluation and interpretation of current research in the field of dietetics. Professional oral and graphic presentation of results obtained from research completed in NUTR 682 or HTH 700 required during the final semester in which the course is taken. May be repeated up to a total of two credits. *Prerequisite: Undergraduate statistics.*

NUTR 697. Directed Research Continuance. 1 credit.

Continued study, research and writing in the area of directed research project. Course may be repeated as needed, but does not count toward degree requirements. Course will be graded on an S/U basis.