approaches specifically for relationship building, effective communication, facilitation of informed decision-making, conflict awareness and management, crisis intervention, constructive feedback, and delivery of potentially disturbing information; in academic, health care, and community-based settings.

NRSG655
Research Utilization
Prepares the student to critically evaluate research studies and to design strategies for integrating or utilizing research to guide and develop an evidence based practice specific to their anticipated advanced practice role. Spring

NRSG658
Learning Theory and Health Teaching
Provides advanced practice nurses with teaching strategies that are both theoretical and evidence based followed with strategies and skills necessary for successful instruction and teaching of clients, community, nursing students, and other health care professionals. Prerequisites: NRSG510, 517, 580, 638, 655. Fall

NRSG660
Curricular Development
Provides students with knowledge related to analysis, development or design, and re-design or improvement, and evaluation of client, student, or professional nursing curricula. Instruction on principles and procedures for curricular development will be addressed. Prerequisites: NRSG510, 517, 580, 638, 655. Fall

NRSG665
Nursing Education Outcomes
Students are provided information on methods for assessing overall educational outcomes, such as the individual patient education, classroom instruction, and in providing continuing education units for professional nurses. Prerequisites: NRSG 660, 658, 668. Spring

NRSG668
Roles in Nursing Education
Explores the various teaching and faculty roles that impinge upon the nurse educator. An understanding of the requirements of scholarship activities such as clinical currency, academic productivity, and teaching expertise are examined. Prerequisites: NRSG510, 517, 580, 638, 655. Fall

NRSG680
Teaching Practicum
Provides the student with the opportunity to utilize knowledge gained in the nursing-education courses, in a nursing-focused educational experience of their choosing. A total of 300 clock hours are required. Prerequisites: NRSG 660, 658, 665, 668. Fall

NRSG690
Independent Study

NRSG698
Research Utilization Project
Requires the student to use a recognized research utilization model to develop an evidence-based innovation for possible implementation. Must take either 2 credits and complete the project in one semester or take 1 credit/semester in two consecutive semesters and complete the project. Prerequisite or corequisite: NRSG655.

NUTRITION AND WELLNESS

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http://www.andrews.edu/nutrition

Faculty
Winston J. Craig, Chair
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Gregory Morrow
Patricia B. Mutch

Undergraduate Programs

The Didactic Program in Dietetics (DPD) at Andrews University is currently accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 216 W. Jackson Blvd., Chicago, IL 60606-6995, 312/899-5400.

PREPARATION FOR THE REGISTRATION EXAM
Anders University offers two programs to prepare the student for the registration examination given by the Commission on Dietetic Registration of the American Dietetic Association (ADA).

• The DPD program, which meets the academic requirements for registration eligibility.
• The Dietetic Internship, a post-baccalaureate program, designed to meet the supervised practice requirements for registration eligibility.

The Dietetic Internship at Andrews University is currently accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 216 W. Jackson Blvd., Chicago, IL 60606-6995, 312/899-5400.

THE DIDACTIC PROGRAM IN DIETETICS (DPD)
The DPD has two phases:
1. Pre-dietetics: Introductory pre-professional and General Education courses obtained at Andrews University or another accredited college or university.
2. Dietetics: Two years of study in clinical dietetics, food-service management, and community nutrition obtained on the Andrews University campus. Students must complete requirements for the professional Bachelor of Science in Dietetics degree. Students who complete the DPD requirements will be issued a DPD verification statement.
After completion of the BS course work for the DPD, an eight month Dietetic Internship must be completed by a dietetic student for registration eligibility. This supervised practice provides experiences in three main areas of dietetics—community nutrition, clinical nutrition, and food-service management. The Dietetic Internship is available at several hospitals affiliated with Andrews University. Successful completion of this intensive eight-month supervised practice permits a student to write the national registration exam in dietetics. Students who successfully complete the internship will be issued a verification statement.

Upon passing the registry exam, graduates receive formal recognition as Registered Dietitians (RD). This status is maintained by participating in continuing professional education activities approved by the ADA. With advanced study or experience, the dietitian may qualify as a specialist in clinical dietetics, food-service management, nutrition education, or research.

Admission Requirements. Prospective dietetics students apply to the director of the Didactic Program in Dietetics in their sophomore year for acceptance into phase 2 of the program by May 15 for the following autumn semester. Successful completion of the prerequisite courses listed below with a minimum cumulative GPA of 2.50 in FDNT, mathematics, and science courses, is required for entry into phase 2 of the program.

BS: Dietetics (DPD Program)—73
Prerequisite Courses—35
ACCT121; BCHM120; BIOL111, 112, 260; CHEM110; FDNT118, 124, 230; PSYC101; and either BHSC220 or 235.
Cognate Requirements—6
BSAD355, 384
DPD Requirements—32
FDNT310, 351, 352, 421, 422, 431, 432, 448, 460, 485, 495, 498.

No grade below a C- is accepted for prerequisite and cognate courses (or below a C for dietetic courses). Students planning graduate study in nutrition or medical dietetics are required to take the following chemistry courses: CHEM131, 132; CHEM231, 232, 241, 242; BCHM421, 422, 430. At least 124 semester hours are required for graduation. For BS requirements other than those listed above, refer to the General Education requirements listed on p. 38. Graduation is dependent upon the completion of all curriculum requirements with the maintenance of at least a 2.25 cumulative GPA in all dietetic and cognate courses. Graduates are provided with a Didactic Program in Dietetics Verification Statement, testifying to the fact that they have successfully completed the requirements for a BS degree in Dietetics. Students must successfully pass a comprehensive review exam in their senior year before they are eligible to receive a DPD verification form. Dietetics graduates are eligible to apply for an accredited Dietetic Internship program.

BS: Nutrition Science—62
BCHM421; BIOL165, 166; CHEM131, 132, 231, 232, 241, 242; FDNT230, 310, 448, 460, 485, 495; ZOOL465; 6 credits chosen from FDNT124, 421, 422, 431, 469, 476; and 8 elective credits selected from chemistry, biology, nutrition, and physics in consultation with the program advisor.

The BS in Nutrition Science is recommended for pre-medical students wishing to have a nutrition and health promotion emphasis as they prepare for medical school. However, this BS does not prepare students for dietetics registration eligibility.

Minor in Food and Nutrition—20
Must include FDNT124, 230, 310, 448.

PHYSICAL ACTIVITY COURSES
Each class includes both a fitness component as well as skills instruction. The goals of the physical activity courses are:
1. To aid individuals in the development of Christlike attitudes and conduct in recreational activities, and to promote learning opportunities for cooperative teamwork.
2. To promote the development of physical fitness and physical skills that will continue throughout life and enhance the quality of one's leisure time.
3. To provide a variety of physical activities designed to meet the needs and desires of a diverse student population.

Graduate Program

MS: Nutrition and Wellness—32
Admission Requirements. Applicants for the MS: Human Nutrition must have completed undergraduate credits in nutrition, and approved cognates as follows.
1. Two nutrition courses (equivalent to FDNT230 and one advanced course).
2. Survey courses in chemistry with labs, including inorganic, organic, and biological (equivalent to CHEM110 and BCHM120).
3. Human physiology (equivalent to BIOL112).
4. Statistics (equivalent to STAT285).
5. Applicants with deficiencies may be admitted provisionally, but they must take courses in addition to those in the degree program to meet deficiencies.

Degree Requirements. In addition to the general academic requirements for graduate degrees outlined on p. 47, the following departmental requirements should be noted:
1. A minimum of 32 semester credits
2. The core of 21 nutrition credits including EDPC635, FDNT448, 498, 4 credits of FDNT545, 565, 2 credits of FDNT586 and 2 credits of FDNT680, MKTG500.
3. Students electing to do a thesis must complete 6 credits of FDNT699; students electing a non-thesis option must complete 3 credits of FDNT698.
4. Students who present a signed verification statement outlining their successful completion of an undergraduate dietetics program may apply to do a Dietetic Internship as part of their MS in Nutrition and Wellness. Students accepted into this non-thesis program must register for 4 credits of FDNT594 in the fall semester and 4 credits in the spring semester, in the place of FDNT698. The Dietetic Internship is available only to students seeking registration eligibility, not to students with an RD. Successful completion of this intensive 8-month supervised practice qualifies students to write the national registration exam in dietetics.
5. Electives are to be selected in consultation with the graduate advisor from graduate course offerings in nutrition, health, education, communication, behavioral science, business, and marketing.
Courses

See inside front cover for symbol code.

FDNT118 (1)
The Profession of Dietetics
A discussion of the dietetics profession and the role of the dietitian within the health-care team. Ethical concerns in the practice of dietetics. Spring

FDNT124 (3)
Food Science
Chemical and physical properties of foods that affect food handling, preparation, and preservation. Lab procedures apply the principles studied to the preparation of foods. Weekly: 2 lectures and a 3-hour lab. Fall

FDNT230 (3 or 4)
Nutrition
Basic principles of human nutrition. Nutrient sources, functions, and toxicities. Applies toward the General Education requirement in science. Weekly: 3 lectures; for General Education credit, a weekly 3-hour lab is required for 4 credits. Fall, Spring

FDNT230 V (3)
Nutrition
AU/HSI course—see content above.

FDNT310 (3)
Nutrition in the Life Cycle
Study of the nutritional needs of the healthy person throughout the life cycle. The influence of socioeconomic, cultural, and psychological factors on food and nutritional behavior. Prerequisites: FDNT230. Fall

FDNT351 (4)
Food Service Management I
Introduction to the systems approach and application of the functions of management to foodservice systems. Principles of menu development, food production, service, delivery, procurement, sanitation, safety, and equipment selection in food service organizations. Weekly: 3 hours lecture and up to 4 hours practicum. Prerequisites: FDNT124; BIOL260; MATH145 or equivalent. Fall

FDNT352 (3)
Food Service Management II
Application of management functions and principles to foodservice organizations. Specific attention to marketing processes, CQI, and integration of foodservice subsystems. Includes the management of human, material, spatial, and financial resources in environmentally responsible ways. Weekly: 2 hours lecture and up to 4 hours practicum. Prerequisites: FDNT351; BSAD355. Spring

FDNT415 (1-4)
Professional Experience
A supervised lab experience introducing the student to the role of a professional in the workplace. Repeatable to 8 credits. Fall, Spring

FDNT421 (2)
Community Nutrition I
Principles for presenting nutrition information to individuals and groups. Community assessment and planning a community nutrition program. Weekly: 1 hour lecture and a 3 hour practicum. Prerequisite: FDNT310. Fall

FDNT422 (2)
Community Nutrition II
Analysis of local and national nutrition programs and services. Impact of nutrition policies on community health. Implementing and evaluating a community nutrition program. Weekly: 1 hour lecture and a 3 hour practicum. Prerequisite: FDNT421. Spring

FDNT431 (4)
Medical Nutrition Therapy I
Introduction to medical nutrition therapy. Medical terminology for healthcare professionals. Assessment of nutritional status by various methods. Development of nutritional care plans. Theory and techniques of counseling in various settings. Weekly: 3 hours lecture and 4 hours practicum. Prerequisites: FDNT310, 485. Fall

FDNT432 (4)
Medical Nutrition Therapy II
Implement medical nutrition therapy through the assessment of nutritional status and development of care plans for a variety of clinical conditions, such as chronic diseases, oncology, nutrition support, and renal disease. Weekly: 3 hours lecture and 4 hours practicum. Prerequisite: FDNT431. Fall

FDNT440 (1-3)
Topics in Nutrition
Selected topics in nutrition. Repeatable with different topics.

FDNT448 (3)
Nutrition and Wellness
The dietary factors associated with the major chronic diseases of Western society. The use of plant-based diets in health promotion and disease prevention. Discussion of herbal therapies. Prerequisite: FDNT230. Fall

FDNT460 (1-2)
Seminar
Review of contemporary issues and/or current literature in nutrition. Repeatable to 3 credits. Spring

FDNT469 (2-3)
International Nutrition
A study of world food production, supply, storage, and marketing. Causes and symptoms of nutritional deficiencies in the developing world. Diseases of the affluent. Effects of nutritional deprivation on health and productivity. Effects of social and cultural factors in nutrition. Fall

FDNT476 (2)
Nutrition and Aging
Physiological changes in aging. Food-selection patterns, nutritional needs, nutritional disorders, and chronic diseases. Prerequisite: FDNT230. Fall

FDNT485 (3)
Nutrition and Metabolism
Study of the nutrients and their functions within the living cell and the complex organism. Discussion of the major metabolic pathways. Prerequisites: BCHM120, FDNT230. Spring

FDNT495 (1-3)
Independent Study/Readings
Repeatable to 4 credits in independent study and 4 credits in readings on nutrition and dietetics. Consent of instructor required.
FDNT498  *Research Methods*  
A study of research methodology, survey methods, and applied statistics as they relate to dietetics. *Fall*

FDNT540  *Maternal and Child Nutrition*  
Role of nutrition in human growth and development, with emphasis on prenatal period, infancy, childhood, and adolescence.

FDNT545  *Nutrition and Wellness Programs*  
Development of nutrition and wellness programs for community groups emphasizing health promotion. Includes participation in community assessment, program planning, implementation, and evaluation of a program. Prerequisite: FDNT448.

FDNT555  *Advanced Human Nutrition I*  
Functions and nutritional metabolism of simple and complex carbohydrates, lipids, amino acids, and proteins. Public health applications. Prerequisite: A course in biochemistry. *Fall*

FDNT556  *Advanced Human Nutrition II*  
Functions and nutritional metabolism and interactions of fat-soluble and water-soluble vitamins, minerals, and trace minerals. Public health applications. Prerequisite: A course in biochemistry. *Spring*

FDNT565  *Current Issues in Nutrition and Wellness*  
Discussion of current issues in nutrition, food safety, public health, and wellness. Prerequisite: FDNT230. *Spring*

FDNT570  *Maternal and Child Health*  
Preventive health care and conditions necessary for mother and child well-being in developing countries. Community-based interventions for child survival. Management of maternal and child health programs.

FDNT585  *Topics in_________*  
Selected topics in the areas of nutrition and wellness. Repeatable to 6 credits.

FDNT586  *Professional Experience*  
Opportunities for unique supervised practical experiences in various organizations to introduce the student to the role of a professional. A maximum of 4 credits per semester can be taken. Repeatable to 8 credits.

FDNT594  *Dietetic Internship*  
The internship is equivalent to a full-time load. It involves 35–40 hours per week of supervised practice. Open only to students seeking registration eligibility with the Commission on Dietetic Registration of the American Dietetic Association. *Fall, Spring*

FDNT600  *Research Design*  
Criteria for the organization, analysis, and reporting of research in Nutrition. Preparation of a proposal for a master's thesis or project. Prerequisite: FDNT498 or equivalent. *Spring*

FDNT648  *Workshop*  
(1–4)

FDNT680  *Research Seminar*  
Individual reports and discussion of recent research data. Repeatable to 4 credits. Consent of instructor required.

FDNT690  *Independent Study*  
Individual study and/or research. Consent of instructor required. Repeatable to 6 credits.

FDNT698  *Research Project*  
(3)

FDNT699  *Master's Thesis*  
Repeatable to 6 credits.

**HEALTH COURSES**

**HLED120**  *Fit and Well*  
$ (1)  
A balanced up-to-date coverage of all critical areas of wellness including physical fitness, nutrition, weight management, stress, cardiovascular disease, cancer, addictions, and injury prevention. Practical tools will be given to help adopt healthier lifestyles.

**PETH465**  *Exercise Physiology*  
Study of the body’s physiological response to exercise. Pre-requisites: BIOL111, 112 or equivalent. *Fall*

**PETH495**  *Independent Study/Reading/Research/Project*  
(1–4)  
*Independent Study*: Directed study in an area of interest resulting in a formal term paper.  
*Independent Readings*: Weekly meetings with the instructor for individual assignments and reports.  
*Independent Research*: Design and execution of an experiment or causal-comparative research.  
*Independent Project*: Practical or creative experience or project in consultation with instructor. Permission required from the instructor and department chair. Thirty hours of involvement required for each credit. Contract of proposed activity required. Repeatable to 4 credits in each area. *Fall, Spring*

**PHYSICAL ACTIVITY COURSES**

**PEAC106**  *Beginning Basketball*  
$ (1)  
Instruction in the fundamental skills of shooting, passing, ball-handling, man-to-man defensive play, basic rules, offensive strategy, basic rules, and team play.

**PEAC107**  *Beginning Volleyball*  
$ (1)  
Instruction in the basic skills of serving, setting, passing, and spiking, and the basic instruction on rules, and 2, 3, 4, and 6 person team play.

**PEAC109**  *Beginning Softball*  
$ (1)  
Instruction in the fundamental skills of throwing, catching, base
running, batting, and fielding of ground and fly balls. Position play, game situation drills, scrimmages, and rules are covered. Student must supply own glove. Spring

PEAC114 $ (1) Beginning Soccer
Learning the fundamental skills of ball control, passing, blocking, and shooting goals. Indoor or outdoor games depending upon the season and weather.

PEAC116 $ (1) Weight Control and Conditioning
Study of the factors involved in increasing, decreasing, or retaining body weight. Also the practice of exercises designed to control body weight.

PEAC118 $ (1) Beginning Badminton
Analysis and practice of basic strokes, singles and doubles play, strategy, and rule interpretations.

PEAC119 $ (1) Beginning Tennis
Instruction in the fundamental skills of ground strokes, serving, and team play. Basic strategy and rules. Spring

PEAC120 $ (1) Scuba
An entry level course in scuba diving. Includes instruction in the buddy system, dive planning, donning and removing equipment in the water, alternate air sources, buddy breathing, entries, communication, and navigation. Swimming pretest required. YMCA certification. Additional fees apply. Spring

PEAC125 $ (1) Canoeing
Emphasis on precise canoe handling through paddle control. Based on traditional strokes. Practice conducted on local lakes and rivers. One all-day canoe trip or two half-day canoe trips are required. Fall

PEAC128 $ (1) Beginning Golf
Study of the basic techniques of the golf swing. An introduction to the game, rules, and etiquette of golf. Students must supply their own equipment. Additional lab fees required. Spring

PEAC129 $ (1) Beginning Racquetball
Introduction to basic strokes, singles and doubles play, strategy, and rule interpretations. Student must supply own racquet, balls, and eye guards.

PEAC130 $ (1) Special Activities
Special areas beyond normally offered courses: cycling, diving, fitness games, fitness swimming. Repeatable in different areas. Consult the current class schedule for activities offered each year.

PEAC144 $ (1) Beginning Floor Hockey
Introduction to the game, including team composition, rules, and fundamental skills.

PEAC150 $ (1) Swimming
Designed for multilevel instruction. Three basic levels are incorporated into the class based on a swimming pretest: beginners, intermediate, and advanced. No swimming ability necessary. Repeatable.

PEAC206 $ (1) Intermediate Basketball
Analysis of and drills in fundamental skills, offensive and defensive strategies. Emphasis is given to team play.

PEAC207 $ (1) Intermediate Volleyball
Instruction in advanced team play, offensive and defensive strategies. Game scrimmages will help to perfect fundamental skills.

PEAC209 $ (1) Intermediate Softball
Instruction in team play, cutoffs, relays, and offensive and defensive strategies. Game scrimmages use the pitching machine. Students supply own glove.

PEAC210 $ (1) Personal Fitness Plan
A study of basic-fitness concepts and principles in conjunction with a personalized exercise program for disease prevention and health maintenance. Short readings are required weekly.

PEAC214 $ (1) Weight Training and Conditioning
Instruction in body development and coordination activities for men; weight lifting and individual calisthenics program; and body development and shaping for women.

PEAC215 $ (1) Beginning Acrobatics
Learning and performance of the fundamental skills of tumbling and balancing.

PEAC228 $ (1) Intermediate Golf
Analysis of golf swing and techniques of improving the short game. Emphasis on refining the golf swing. Students supply their own equipment. Additional lab fees required. Spring

PEAC229 $ (1) Intermediate Racquetball
Perfection of fundamental skills and strategy.

PEAC240 $ (1) Gymnastics
The student will be a part of a demonstration acrobatic team that will perform for various audiences both spiritual and secular in nature. Students will learn to perform various acrobatics, increase their physical fitness level and learn teamwork. Students will develop tolerance both for others and for themselves as they become a part of the team and will have an opportunity to share what God has done and what He is ready to do again in their lives. Class meets four nights a week for 2 hours throughout the Fall and Spring semesters of the school year. Registration for this class is contingent upon being selected for the team following tryouts. Students only register in the Spring semester.
PEAC244  $ (1)
Intermediate Floor Hockey
Analysis of and drills in fundamental skills, position play, and
team strategies. Emphasis given to team play.

PEAC245  $ (1)
Outdoor Skills Seminar:
A six-day experience (Sunday–Friday) beyond the normally
offered activity courses: Canoeing, Off-road Biking, Road Biking.
Repeatable in different areas. Instructor's permission required.
Consult the current class schedule for activities offered each year. Summer Intensive.

PEAC255  $ (1)
Intermediate Acrobatics
Learning, performance, and exploration of tumbling and balanc-
ing. With emphasis on conceptual creativity, choreography, and
program management. Instruction on spotting techniques, teaching
theories, progression and safety will be given.

PEAC266  (1)
Officiating
Practical field experience in officiating. Rules, officiating
mechanics, and signals, learned and practiced. MHSAA certifica-
tion available. Certified officials have opportunities to earn up to
$50.00 a game for officiating elementary school, middle school,
and high school athletic contests. Prerequisite: Previous knowl-
edge of the game and/or experience playing the game.

PEAC275  $ (1)
Outdoor Trips-N-Treks
One to two week trips beyond the normally offered activity courses:
Biking, Backpacking, Canoeing. Repeatable in different areas.
Instructor's permission required. Consult the current class sched-
ule for activities offered each year. Summer Intensive

PEAC300  (1)
Lifeguarding
Instruction in accident prevention, aquatic facility supervision,
and water-rescue techniques. Successful completion results in
American Red Cross Lifeguard Training certification. Current
first aid and CPR certification included. Prerequisite: Ability to
swim 500 yards in 10 minutes or less. Fall

PEAC330  $ (1)
Wilderness Living
Instruction in camping and survival techniques, open fire cooking,
orienteering, backpacking, wilderness first aid, edible wild plants,
and tracking. Students supply their own equipment. One weekend
trip required.

PEAC350  (1)
Water Safety Instructor
Instruction in techniques for teaching American Red Cross
swimming courses. Current CPR certification required.
Swimming pretest required. Spring

PEAC389  (1)
WSI Internship
Students who have a current American Red Cross Water Safety
Instructor's Certification or equivalent can take advantage of this
opportunity. Participants will teach and organize a class of
students for the Learn-To-Swim program. Teachers will be expect-
ed to provide lesson plans and teach all the required lessons. Fall, Spring, S/U.

PHYSICAL THERAPY

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Kurt J. Jackson
Harold L. Merriman
Janet A. Mulcare

Academic Credits

Berrien Springs Campus
BHS: Bachelor of Health Science
(Interim degree for DPT students)
DPT: Doctor of Physical Therapy 116
BS: Anatomy & Physiology (phasing out)
Interim degree for MSPT students)
t-DPT: Doctor of Physical Therapy 30-38
DScPT: Doctor of Science in Physical Therapy 63

Dayton, Ohio Campus
MPT: Master of Physical Therapy 80
Note: No longer accepting MPT students

Physical therapy is a health profession dedicated to evaluating,
treating, and preventing physical injury and disease. Physical ther-
pists design and implement the necessary therapeutic interventions
to promote fitness, health and improve the quality of life in patients.
They also become active in consultation, education and research.