Andrews University

Seek Knowledge. Affirm Faith. Change the World.

2013 – 2014 Bulletin

School of Health Professions

Berrien Springs, Michigan 49104
www.andrews.edu 800–253–2874

Admission to Andrews University is available to any student who meets the academic and character requirements of the university and who expresses willingness to cooperate with its policies. Because Andrews University is operated by the Seventh–day Adventist Church, the majority of its students are Seventh–day Adventists. However, no particular religious commitment is required for admission; any qualified student who will be comfortable within its religious, social, and cultural atmosphere may be admitted. The university does not discriminate on the grounds of race, color, creed, disability, national or ethnic origin, sex, marital status, or handicap. On request it makes available to the public its annual financial report. To obtain a copy, contact the Office of the Vice President for Financial Administration at the address below

Every effort has been made to assure the accuracy of information in this bulletin. Students are advised, however, that bulletin provisions do not constitute a contract between a student and Andrews University and that attendance at Andrews University is a privilege and not a right. The university faculty and administration reserve the right to make and give public notice of such changes as deemed necessary during the period for which this bulletin is in effect.

Please contact the appropriate personnel for information pertaining to schools, departments, programs, and courses. For all other bulletin inquiries you may contact the Publications & Communication Specialist in the Office of Academic Records by email at bulletin@andrews.edu or by phone at (269) 471–3233.

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Course Prefixes and Numbers

Courses are listed by course prefix and course number. Course prefixes are listed below in alphabetical order. At the end of each prefix designation is an abbreviated symbol in parentheses for the school in which the prefix occurs. Symbols are as follows:

College of Arts and Sciences (CAS)
School of Architecture, Art & Design (SAAD)

ACCT	Accounting (SBA)
AFLT	Aeronautical Flight
AGRI	Agriculture
ALHE	Allied Health (CAS)
ANSI	Animal Science
ANTH	Anthropology (CAS)
ARCH	Architecture (SAAD)
ART	Art Studio (SAAD)
ARTH	Art History (SAAD)
AVIA	Aviation
AVMT	Aviation Maintenance
BCHM	Biochemistry (CAS)
BHSC	Behavioral Sciences (CAS)
BIBL	Biblical Languages (CAS)
BIOL	Biology (CAS)
BSAD	Business Administration (SBA)
CHEM	Chemistry (CAS)
CHIS	Church History (SEM)
CHMN	Christian Ministry (SEM)
CIDS	Comm & Intl Development (CAS)
COMM	Communication (CAS)
CPTR	Computing & Software Engineering (CAS)
DSGN	Design (SAAD)
DSRE	Discipleship & Religious Education (SEM)
ECON	Economics (SBA)
EDAL	Educational Administration & Leadership (SED)
EDCI	Educational Curriculum & Instruction (SED)
EDFN	Educational Foundations (SED)
EDRM	Research & Measurement (SED)
EDTE	Teacher Education (SED)

School of Business Administration (SBA)
School of Education (SED)

EDUC	Education—General (SED)
ENGL	English (CAS)
ENGM	Engineering Management (CAS)
ENGR	Engineering (CAS)
ENGT	Engineering Technology (CAS)
ENSL	Intensive English (CAS)
FDNT	Nutrition (SHP)
FILM	Film (SAAD)
FMST	Family Studies (CAS)
FNCE	Finance (SBA)
FREN	French (CAS)
FTES	Fitness & Exercise Studies (SHP)
GDPC	Graduate Psychology & Counseling (SED)
GEOG	Geography (CAS)
GNST	General Studies (CAS)
GRMN	German (CAS)
GSEM	General Theological Seminary (SEM)
HIST	History (CAS)
HLED	Health Education (SHP)
HONS	Honors (all undergraduate)
HORT	Horticulture
IDSC	Interdisciplinary Studies (CAS)
INFS	Information Systems (SBA)
INLS	International Language Studies (CAS)
JOUR	Journalism (CAS)
LEAD	Leadership (SED)
MAED	Mathematics Education (CAS)
MATH	Mathematics (CAS)
MDIA	Media (SAAD)
MKTG	Marketing (SBA)
MLSC	Medical Laboratory Sciences (SHP)
MSCI	Mathematics and Science (CAS)

School of Health Professions (SHP)
Seventh–day Adventist Theological Seminary (SEM)

MSSN	World Mission (SEM)
MUCT	Music Composition & Theory (CAS)
MUED	Music Education (CAS)
MUHL	Music History & Literature (CAS)
MUPF	Music Performance (CAS)
MURE	Music—Religious (CAS)
NRSG	Nursing (SHP)
NTST	New Testament Studies (SEM)
OTST	Old Testament Studies (SEM)
PHIL	Philosophy (CAS)
PHTH	Physical Therapy (SHP)
PHTO	Photography (SAAD)
PHYS	Physics (CAS)
PLSC	Political Science (CAS)
PORT	Portuguese (CAS)
PREL	Public Relations (CAS)
PSYC	Psychology (CAS)
PTH	Physical Therapy – Professional & Post–Professional (SHP)
RELB	Religion—Biblical Studies (CAS)
RELG	Religion—General (CAS)
RELH	Religion—History (CAS)
RELP	Religion—Professional & Applied Studies (CAS)
RELT	Religion—Theology (CAS)
SOCI	Sociology (CAS)
SOWK	Social Work (CAS)
SPAN	Spanish (CAS)
SPED	Special Education (SED)
SPPA	Speech–Language Pathology & Audiology (SHP)
STAT	Statistics (CAS)
THST	Theology & Christian Philosophy (SEM)

COURSE NUMBERS

Non Credit	Below 100	Courses enabling the student to qualify for freshman standing
Undergraduate Lower Division	100–199	Courses usually taken during the freshman year
	200–299	Courses usually taken during the sophomore year
Undergraduate Upper Division	300–399	Courses usually taken during the junior year
	400–499	Courses usually taken during the senior year
Graduate Level	500–699	Courses for graduate students only
	700–999	Courses for post–masters students

PROGRAM & DEGREE INDEX

School of Health Professions

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Mission

To provide excellence in education for healthcare professionals that fosters collaboration, research, and service within a Christ–centered environment.

Pre–Professional Health Care Programs

The undergraduate programs in the School of Health Professions provide an excellent preparation for and bridge into medical school, dental school, and other graduate healthcare and research graduate programs. The knowledge acquired and patient–centered experience of each of our health care professional programs establishes a solid foundation for future professional growth and pursuit of career goals.

Pre–Professional

Pre–Professional Program in Chiropractic

Pre–Professional Programs

The School of Health Professions offers certain pre–professional curricula for students who plan to enter professional schools. For medical and paramedical curricula, Andrews University maintains a special relationship with Loma Linda University.

Chiropractic

Lee. E. Olson, Coordinator
269–471–6491
Physical Therapy Building
Entrance requirements for colleges of chiropractic vary. Students are advised to consult the admissions advisor at the chiropractic school to familiarize themselves with the requirements of the school of their choice. The admission requirements of chiropractic schools range from 60 credits to a baccalaureate degree and a minimum GPA of 2.50. For a list of the various schools contact the chiropractic coordinator. For information about the profession and publications check out the website: www.amerchiro.org.
The courses listed below at a minimum grade level of C with a cumulative GPA of at least 2.5 and 90 semester or 135 quarter credits satisfy the requirements for Palmer College of Chiropractic.

Pre–chiropractic Curriculum (semester hours)

Biology (BIOL 165 & BIOL 166 recommended)—8–10
General Chemistry—3
Chemistry Elective—3
Organic and/or Bio Chemistry—6
General Physics—6
English Composition and/or Communication Skills — 6
Introduction to Psychology — 3
Social Sciences/Humanities — 15

Pre–Professional Program in Cytotechnology

Pre–Professional Programs

The School of Health Professions offers certain pre–professional curricula for students who plan to enter professional schools. For medical and paramedical curricula, Andrews University maintains a special relationship with Loma Linda University.

Cytotechnology

Marcia Kilsby, Coordinator
269–471–6294
Halenz Hall (Science Complex)
Cytotechnology is a specialty within a broad field of clinical laboratory science. Cytotechnologists aid in the early detection of disease by differentiating normal, atypical, and malignant cells. In recognizing microscopic abnormalities of cells and cellular patterns from the various body sites, the cytotechnologist assists the pathologist in detecting cancer at its earliest and potentially most curable stage. Medical applications of cytologic techniques are constantly expanding, particularly in the diagnosis and
management of the cancer patient.

Students pursuing a career in cytotechnology should complete the first two or three years (according to their selection of school for technical education) and then complete the professional courses offered at Loma Linda University or another school. For
more information: www.ascp.org.

Pre–Professional Program in Health Information Management

Pre–Professional Programs

The School of Health Professions offers certain pre–professional curricula for students who plan to enter professional schools. For medical and paramedical curricula, Andrews University maintains a special relationship with Loma Linda University.

Health Information Management

Health Information Administrator
Marcia A. Kilsby, *Coordinator*
269–471–6294
Halenz Hall (Science Complex)
Health information management includes the development of information systems to provide optimal user access to medical records and other vital patient data. The health information administrator also manages or consults in maintenance of quality and legal standards for data used in administrative planning, research, health care quality evaluation, and financial reimbursement. For more information: www.ahima.org.

Pre–Professional Program in Physical Therapy

Pre–Professional Programs

The School of Health Professions offers certain pre–professional curricula for students who plan to enter professional schools. For medical and paramedical curricula, Andrews University maintains a special relationship with Loma Linda University.

Physical Therapy

Jillian Panigot, Advisor
269–471–6490
Physical Therapy Building
Andrews University offers all of the prerequisite courses necessary for admission into the Doctor of Physical Therapy (DPT) program. Students take three years (92 semester credits) of the prerequisite courses at Andrews, or any accredited U.S. college, followed by three years in the DPT program. Please see the physical therapy section of this bulletin for specific course requirements.

Other Programs

Pre–Professional Program in Dentistry (Health Professions)

Marcia Kilsby, 269–471–6294 (Science Complex)
Winston Craig, 269–471–3351 (Marsh Hall)
Preference is given to applicants who have a broad academic background with a baccalaureate degree. The minimum entrance requirement is 96 semester credits with a 2.70 GPA (C=2.00) in both science and non–science courses, although it is recommended that students should maintain an A/B average in science as well as overall. The Dental Aptitude Test (DAT) must be taken not later than October of the year preceding admission. Minimum entrance requirements for most dental schools follow. For more information, contact the American Association of Dental Schools: www.aads.jhu.edu and the American Dental Association www.ada.org.

Pre–Professional Programs

The School of Health Professions offers certain pre–professional curricula for students who plan to enter professional schools. For medical and paramedical

curricula, Andrews University maintains a special relationship with Loma Linda University.

Required courses for applicants to Loma Linda University:

English Composition—6
Foundations of Biology—10
General Chemistry—8
Organic Chemistry—8
General Physics—8
Biochemistry—4

Recommended:

Human anatomy, biochemistry, histology, computer science, systems physiology, management and organization, fundamentals of accounting, a survey of calculus, machine shop, and religion.

Total pre–dental credits: 96

Pre–Professional Program in Medicine (Health Professions)

Students from Departments within The School of Health Professions
Marcia Kilsby, 269–471–6294, (Science Complex)
Winston Craig, 269–471–3351, (Marsh Hall)
Although allopathic (MD) and osteopathic (DO) medicine represent different philosophies of patient care, a physician in either branch of medicine is required to pass the same national board examination to practice.

Students seeking admission to medical schools are encouraged to plan a baccalaureate degree that includes courses which meet the stated entrance requirements of the medical school of their choice as listed in Medical School Admissions Requirements or the websites of the Association of American Medical Colleges: www.aamc.org and the American Association of Colleges of Osteopathic Medicine: www.aacom.org. The pre–medical student may choose any major or minor and is encouraged to become acquainted with the main bodies of knowledge as represented by the various academic disciplines.

In light of adequate preparation for the Medical College Admissions Test (MCAT) and changes in medical school requirements, students should incorporate classwork in the following areas into their curriculum:

- Biochemistry
- Sociology
- Psychology
- Statistics

Pre–Professional Programs

The School of Health Professions offers certain pre–professional curricula for students who plan to enter professional schools. For medical and paramedical curricula, Andrews University maintains a special relationship with Loma Linda University.

Required Courses

For Applicants to Loma Linda University School of Medicine
English Composition—6
Foundations of Biology—10
General Chemistry—8
General Physics—8
Organic Chemistry—8
Religion—9
Students should maintain an A/B average in science as well as overall.

Pre–Professional Program in Occupational Therapy (Health Professions)

Students from Departments within the School of Health Professions
Jillian Panigot, 269–471–6490, (Physical Therapy Building)
The occupational therapist helps people cope with psychological or physiological dysfunction.

Pre–Professional Programs

The School of Health Professions offers certain pre–professional curricula for students who plan to enter professional schools. For medical and paramedical curricula, Andrews University maintains a special relationship with Loma Linda University.

Prerequisites for Loma Linda University Admission

To be eligible for admission, the applicant must have completed a minimum of 96 quarter units (64 semester units) at an accredited college or university. The following prerequisites are required and must be completed successfully with a grade of C or better. Upon successful completion of didactic and fieldwork requirements, students will graduate from LLU with a bachelor's degree in health science and a master's in occupational therapy. Students are then eligible to take the NBCOT's National OT board exam.

Prerequisites: Domain 1: Spiritual and Cultural Heritage

Religious studies, 4 quarter units per year of full–time study.
(Applies only to students attending Seventh–day Adventist colleges.)

Minimum 20 quarter units, or 14 semester units. Choose from three subject areas: fine arts, history, civilization, literature, modern language, or philosophy. English as a second language may not be included. A maximum of 4 quarter units will be accepted in applied or performing art/music.

Prerequisites: Domain 2: Scientific Inquiry and Analysis: Natural Sciences

Human Anatomy with lab

Human Physiology with lab: 2 semesters or quarters of A&P are required.
Select one additional science course from chemistry, physics or physical science.

Mathematics: Two years of HS mathematics or equivalent. Accepted courses include algebra I&II, geometry, with grades of C or better. (These credits do not transfer although they meet the math requirement.)
Completed Need Social Sciences:

Sociology

General Psychology

Human Growth & Development. (Other acceptable equivalents are Developmental Psychology, Life Cycle, or Child Psychology and Adolescent Psychology.)

Prerequisites: Domain 3: Communication (9–13 quarter units, or 6–9 semester units)

Freshman English Composition, complete sequence, as required by the college you attended or are currently attending.
Note: If you test out of any Freshman English courses, you are still required to meet the minimum number of units for this Domain.
Speech, public speaking

Domain 4:

Health education (personal health or nutrition)
Two physical activities courses

Electives

Minimum requirement for entry is 96 quarter units, or 64 semester units.
Computer knowledge in the following areas is required: creating college level papers and assignments, Internet–based research, e–mail usage, PowerPoint presentations, online learning components.

Observation/Volunteer Service

40 hours of observation in occupational therapy settings. Documentation of community service performed is permissible as partial fulfillment of this requirement. Documentation of observation and/or community service must be submitted prior to admission consideration.

CPR—infant, child and adult. BLS health care provider. We only accept CPR from American Heart Association. This certification is not needed for the admissions process, but will be required upon acceptance to the program.

Note:

A minimum grade of C is required for transfer credit. C– and D grades are not transferable.

Pre–Professional Program in Physician Assistant (Health Professions)

Students from Departments within The School of Health Professions

Winston Craig, 269–471–3351 (Marsh Hall)

Physician assistants (PAs), members of a health–care team, practice medicine with supervision of licensed physicians. PAs perform a wide range of medical duties from basic primary care to high–technology specialty procedures. Professional PA education offered at any one of more than 100 accredited schools is an intensive 2–3 year program. Most PA programs are moving toward requiring a bachelors degree including courses in biology, chemistry, English, humanities/social science, mathematics, and psychology. The level of the science courses varies from program to program; consequently, each school should be consulted about its prerequisite requirements. Acceptance to a professional program typically requires an extensive health–care experience such as nurse assistant, medical/X–ray lab technician, respiratory therapist, paramedic, hospital aide, and emergency medical technician.

The National Directory of PA Programs may be ordered from APAP at 950 N. Washington St., Alexandria, VA 22314 or phone: 800– 708–7581. PA programs and education can be accessed via the web: www.aapa.org.

Pre–Professional Programs

The School of Health Professions offers certain pre–professional curricula for students who plan to enter professional schools. For medical and paramedical curricula, Andrews University maintains a special relationship with Loma Linda University.

Medical Laboratory Sciences

Halenz Hall, Room 326
269–471–3336
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Faculty
Marcia A. Kilsby, Chair, *MLS Program Director*
Aileen Hyde
Tim A. Newkirk
Karen A. Reiner, *Graduate Program Coordinator*
Richard D. Show

Mission

The mission of the Department of Medical Laboratory Sciences, in harmony with Andrews University and the Seventh–day Adventist Church, is to prepare students for Christian service as medical laboratory scientists.

The MLS **department** encourages faculty in professional, educational and spiritual growth.

The MLS **faculty** educates students to develop excellence in the skills necessary for a life work of service in quality health care and dedication to improving the human condition.

MLS **graduates** will minister to the needs of others by practicing and promoting standards of excellence as medical laboratory science professionals.

Bachelors

Allied Health Administration BS

BS: Allied Health Administration

This degree is designed for health–care professionals seeking to enhance the knowledge they already have and to help them prepare for future career employment requirements. The degree format features a strong general education and administrative/business component and provides an academic foundation for health–care administrative positions. It is open only to individuals holding an associate degree or a two–year certificate in an allied–health professional area with earned certification where applicable in such areas as diagnostic ultrasound, nuclear medicine, physician assistant, radiation therapy, radiologic technology, respiratory therapy, and special procedures in radiologic technology. Admission to the program is by permission of the Department of Medical Laboratory Sciences chair.

General Education Requirements—46

See professional program requirements, see here, and note the following specific requirements:

Religion:

Equivalent of one per year of full–time enrollment at AU. Courses taken at SDA institutions can be used to meet this requirement.

Language/Communication:

professional degree requirements

History:

professional degree requirements

Fine Arts/Humanities:

professional degree requirements

Life/Physical Sciences:

completed through the associate/certificate program transfer credits

Mathematics:

Statistics preferred. Transfer students—any college level course.

Computer Literacy:

fulfilled through clinical practica

Service:

fulfilled through clinical practica

Social Sciences:

- PSYC 101 – Introduction to Psychology Credits: 3 **and**
- BHSC 220 – An Interdisciplinary Approach to Contemporary Social Issues Credits: 3 **or**
- BHSC 235 – Culture, Place and Interdependence Credits: 3

Fitness Education:

professional degree requirements

Transfer credits — 34

Accepted from an AS degree or certificate program

Business/Administration Courses — 27

- ACCT 121 – Fundamentals of Accounting Credits: 3
- ACCT 122 – Fundamentals of Accounting Credits: 3
- BSAD 355 – Management and Organization Credits: 3
- BSAD 384 – Human Resource Management Credits: 3
- ECON 226 – Principles of Microeconomics Credits: 3
- MKTG 310 – Principles of Marketing Credits: 3
- and management courses selected in consultation with and approval of the advisor.

Practicum in Administration — 4

- ALHE 480 – Practicum in _____ Credits: 4

Total Credits: 65

Medical Laboratory Science BSMLS

Medical Laboratory Science

The degree program includes three years of undergraduate (BS pre–clinicals) studies plus one year (3 semesters) of clinical (BSMLS) education.

Pre–clinical Program. The first three years of undergraduate study include General Education, cognate science, and preclinical degree requirements. Program options feature directed elective course work selected in consultation with the faculty advisor according to the student's career goals and interests.

Clinical (Professional) Program. The year of clinical studies is comprised of lectures and student laboratories on the Berrien Springs campus and clinical practica at an affiliated hospital or clinical laboratory site.

Clinical Experience (Practica). Students work side–by–side with practicing professionals in patient health care during the final portion of the clinical year. Andrews University maintains a number of affiliations with clinical institutions across the country. Student preferences for clinical site assignments are solicited and granted when possible. Final site assignments are made at the discretion of the faculty. Each student is responsible for providing his/her own transportation for the clinical practica. We strongly advice that each student have his/her own car for that purpose.

Clinical Year Admission Requirements. An independent admissions process is required for university students who wish to enter clinical studies. The application form may be obtained from the Department of Medical Laboratory Sciences office. Students should complete the application and return it to the departmental office by January 31 prior to their anticipated clinical–study year.

Admission requires an overall GPA of 2.50. In the admissions process, the GPAs for the cognate science courses and medical laboratory science content courses are computed together. This combined GPA must also be a minimum of 2.50. Preference is given to students with the higher GPAs. Students may only repeat the fundamentals courses once to be eligible for admission consideration for the program.

Applicants must be able to meet the program's published *Essential Functions*, copies of which are incorporated into the application packet, and express a willingness to comply with the principles, rules, regulations, and policies of both the university and the program as they relate to the ideals and values of the Seventh–day Adventist Church and the medical laboratory science profession.

All prerequisite course work, including General Education, cognate science, and pre–clinical courses, must be completed prior to entry into the clinical year. A personal interview may be required at the discretion of the Admissions Committee. In exceptional circumstances, the Admissions Committee may accept students outside the stated policy.

Student Progression in Clinical Year. The clinical year is highly structured and sequential. Enrolled students may not drop a class, audit a class, or earn a grade lower than C– in any class. Students may enter clinical practica only upon satisfactory completion of on–campus course work. Satisfactory completion is defined as a senior–year minimum cumulative GPA of 2.50 and the recommendation of the faculty. A student receiving a cumulative GPA of less than 2.50 may be allowed to advance if the program faculty identifies exceptional circumstances and recommends that the student continue in the program.

Student continuance in the clinical practica is conditional upon acceptable ethical deportment and exemplary patient–care practices. The clinical affiliate supervisors and program faculty are final arbiters in determining student continuance.

Professional Certification. Students who complete the degree program are eligible to write the national certification examination sponsored by the ASCP (American Society for Clinical Pathology) Board of Certification.

Program Accreditation. The Andrews University Program for Medical Laboratory Sciences holds accreditation from the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N River Rd, Suite 720, Rosemont, IL 60018, (773) 714–8880 fax (773) 714–8886, e–mail at info@naacls, or the Web at www.naacls.org.

Academic Calendar 2013–2014

2013

July 26	Fri	Senior summer term (clinicals) ends
July 29	Mon	Registry review week begins
August 3	Sat	Certification ceremony

2014

March 10	Mon	Clinical Practica begins
May 2	Fri	Senior spring semester (clinicals) ends
May 5	Mon	Senior summer semester (clinicals) begins
July 25	Fri	Senior summer term (clinicals) ends
July 28	Mon	Registry review week begins
August 3	Sat	Certification ceremony

BS in Medical Laboratory Science (BSMLS)

General Education Requirements—32

See Professional Degree Requirements, and note the following specific requirements:

Religion:

Equivalent of one per year of full–time enrollment at AU. Courses taken at SDA institutions can be used to meet this requirement.

Language/Communication:

professional degree requirements

History or Fine Arts/Humanities:

professional degree requirements

Life/Physical Sciences:

See cognate sciences below

Mathematics:

Statistics preferred. Students transferring into clinical program—any college level course.

Computer Literacy:

fulfilled through clinical practica

Service:

fulfilled through clinical practica

Social Sciences:

professional degree requirements

Fitness Education:

2 courses. Recommend freshmen take HLED 120 – Fit for Life and one additional course from personal fitness, outdoor skills or team activity. Transfer students take two from the three categories above. Must also pass a physician–administered physical exam before advancement to clinical practica.

Cognate Science Requirements — 26

- BIOL 165 – Foundations of Biology Credits: 5 or 4
- BIOL 166 – Foundations of Biology Credits: 5 or 4 **or**
- BIOL 221 – Anatomy and Physiology I Credits: 4
- CHEM 131 – General Chemistry I Credits: 4
- CHEM 132 – General Chemistry II Credits: 4
- CHEM 231 – Organic Chemistry I Credits: 3
- CHEM 232 – Organic Chemistry II Credits: 3
- CHEM 241 – Organic Chemistry Laboratory I Credits: 1
- CHEM 242 – Organic Chemistry Laboratory II Credits: 1
- (Fulfills General Education Life/Physical Science requirement)

Major Requirements — 61

Prerequisites — 11

- MLSC 105 – Introduction to Medical Laboratory Science Credits: 1
- MLSC 110 – Medical Terminology Credits: 1
- MLSC 210 – Fundamentals of Hematology and Hemostasis Credits: 2
- MLSC 230 – Fundamentals of Clinical Microbiology Credits: 3
- MLSC 240 – Fundamentals of Immunohematology Credits: 1
- MLSC 350 – Fundamentals of Clinical Chemistry Credits: 3

Major courses — 50

- MLSC 320 – Fundamentals of Immunology Credits: 3
- MLSC 400 – Specimen Procurement and Processing Credits: 1
- MLSC 401 – Clinical Year Seminar and Research Methodology Credits: 0
- MLSC 405 – Clinical Year Seminar and Research Project Credits: 1
- MLSC 411 – Hematology Credits: 3
- MLSC 412 – Hemostasis Credits: 1
- MLSC 413 – Clinical Hematology & Hemostasis Practicum Credits: 4
- MLSC 421 – Clinical Immunology and Molecular Diagnostics Credits: 2
- MLSC 423 – Clinical Immunology, Virology, and Molecular Diagnostics Practicum Credits: 1
- MLSC 431 – Clinical Bacteriology Credits: 4
- MLSC 432 – Clinical Mycology and Parasitology Credits: 2
- MLSC 433 – Clinical Microbiology Practicum Credits: 4
- MLSC 441 – Immunohematology Credits: 3
- MLSC 442 – Transfusion Medicine Credits: 2
- MLSC 443 – Clinical Immunohematology Practicum Credits: 4
- MLSC 451 – Clinical Chemistry I Credits: 4
- MLSC 452 – Clinical Chemistry II Credits: 2
- MLSC 453 – Clinical Chemistry Practicum Credits: 4
- MLSC 461 – Body Fluids Credits: 1
- MLSC 463 – Body Fluids Practicum Credits: 1
- MLSC 475 – Medical Laboratory Management Concepts Credits: 2
- MLSC 493 – Practicum Project Credits: 1

Directed electives — 5–8

Students select courses in consultation with and by the consent of their advisors in a planned program to enhance professional preparation. Pre–medical/pre–dental students must include

- PHYS 141 – General Physics I Credits: 4
- PHYS 142 – General Physics II Credits: 4 **or**
- PHYS 241 – Physics for Scientists and Engineers I Credits: 4
- PHYS 242 – Physics for Scientists and Engineers II Credits: 4

- PHYS 271 – Physics for Scientists and Engineers Laboratory I Credits: 1
- PHYS 272 – Physics for Scientists and Engineers Laboratory II Credits: 1

Total Credits: 124

Masters

Medical Laboratory Science, Education Emphasis MSMLS

Degree Requirements

In addition to meeting the general requirements for graduate degree programs, students must meet the following departmental requirements:

- Complete a minimum of 36 semester credits including the core of 20 semester credits and 16 semester credits selected from the chosen emphasis.
- Have the graduate program coordinator approve course selections and course sequencing. Students may substitute alternate courses listed in this Bulletin with the consent of the graduate program coordinator and the approval of the dean of the School of Health Professions.
- No grade lower than C is acceptable.
- Maintain a minimum cumulative GPA of 3.00 for the graduate portion of the program.
- Competency in statistics is required and is determined by the graduate program coordinator.

Core courses — 20 credits

Student must take the following courses:

- MLSC 500 – Foundations for Graduate Study in Medical Laboratory Science Credits: 1
- MLSC 501 – Seminar in Medical Laboratory Science Credits: 1
- MLSC 561 – Laboratory Management Issues and Strategies Credits: 3
- MLSC 562 – Issues in Laboratory Regulations and Practice Credits: 3
- MLSC 585 – Applied Studies in Medical Laboratory Science Credits: 5
- ACCT 501 – Survey of Accounting Credits: 2
- Plus a minimum of 2–3 graduate religion credits selected in consultation with graduate program coordinator.

Choose one of the following courses:

- BSAD 500 – Survey of Management Credits: 2 **or**
- BSAD 515 – Organizational Behavior & Leadership Credits: 3

Education Emphasis — 16 credits

Required Courses

- EDAL 520 – Foundations of Educational Leadership Credits: 2–3
- EDCI 545 – Assessment & Evaluation of Learning Credits: 3
- EDCI 650 – Curriculum Design and Development Credits: 3

Additional courses to select from:

- EDAL 670 – Technology for Leaders Credits: 3
- EDCI 606 – Teaching in Higher Education Credits: 2
- EDCI 610 – Teaching the Adult Learner Credits: 2–3
- GDPC 514 – Psychology of Learning Credits: 3
- GDPC 520 – Life Span Development Credits: 3
- GDPC 554 – Career Development Credits: 3
- LEAD 638 – Issues in Leadership Theory Credits: 2
- A relevant course not listed in this emphasis may be selected in consultation with and approved by the graduate program coordinator.

Admissions Requirements

The Department of Medical Laboratory Sciences offers a graduate program leading to the Master of Science in Medical Laboratory Science. In response to the diversity of skills required by the medical laboratory scientist, the degree features a variety of program emphases, including laboratory sciences, laboratory leadership and administration, education, and laboratory mission and development
Admission requirements. In addition to the general requirements for admission to a graduate program listed in the graduate admission section of this bulletin, the following are departmental requirements:

- Applicants' previous course work must include 16 semester credits of biological sciences, 16 semester credits of chemistry, and one college–level course in mathematics. Deficiencies must be removed prior to admission to the graduate program.
- Applicants must have an overall GPA of at least 3.0 in undergraduate courses and at least 3.0 in the undergraduate cognate science (chemistry, biology, math and medical laboratory science) courses.
- The Graduate Record Examination (GRE) is not required for admission but is required for GRE Scholarship consideration.
- Applicants must hold professional certification and/or licensure in medical laboratory science acceptable to the admissions committee. Certification may be either general or in one of the recognized areas of specialization. Acceptable certification is typically defined as that offered by the American Society for Clinical Pathology Board of Certification for the United States (ASCP) or for international certification (ASCP)[i].
- Students must receive United States professional certification before completing more than 9 graduate credits, and must meet the GPA requirements as stated above.

Individuals lacking United States professional certification may request to be admitted on a provisional basis while they pursue the course work required for eligibility to write the national certification examinations. These clinical courses and their prerequisites require a minimum of four academic semesters. The courses include:

For individuals lacking United States professional certification please see the required coursework found just before the list of Medical Laboratory Science Courses at the end of this section.

Medical Laboratory Science, Laboratory Leadership & Administration Emphasis MSMLS

Degree Requirements

In addition to meeting the general requirements for graduate degree programs, students must meet the following departmental requirements:

- Complete a minimum of 36 semester credits including the core of 20 semester credits and 16 semester credits selected from the chosen emphasis.
- Have the graduate program coordinator approve course selections and course sequencing. Students may substitute alternate courses listed in this Bulletin with the consent of the graduate program coordinator and the approval of the dean of the School of Health Professions.
- No grade lower than C is acceptable.
- Maintain a minimum cumulative GPA of 3.00 for the graduate portion of the program.
- Competency in statistics is required and is determined by the graduate program coordinator.

Core courses — 20 credits

Student must take the following courses:

- MLSC 500 – Foundations for Graduate Study in Medical Laboratory Science Credits: 1
- MLSC 501 – Seminar in Medical Laboratory Science Credits: 1
- MLSC 561 – Laboratory Management Issues and Strategies Credits: 3
- MLSC 562 – Issues in Laboratory Regulations and Practice Credits: 3
- MLSC 585 – Applied Studies in Medical Laboratory Science Credits: 5
- ACCT 501 – Survey of Accounting Credits: 2
- plus a minimum of 2–3 graduate religion credits selected in consultation with graduate program coordinator.

Choose one of the following courses:

- BSAD 500 – Survey of Management Credits: 2 **or**
- BSAD 515 – Organizational Behavior & Leadership Credits: 3

Laboratory Leadership and Administration Emphasis — 16 credits

Required Courses

- ACCT 625 – Financial Analysis and Reporting Credits: 3
- LEAD 638 – Issues in Leadership Theory Credits: 2

Additional courses to select from:

- BSAD 530 – Leadership & Management of Not–for–Profit Organizations Credits: 3
- BSAD 545 – International Business Management Credits: 3
- BSAD 560 – Intercultural Business Relations Credits: 3
- BSAD 615 – Management of Quality Credits: 3
- BSAD 620 – Christian Ethics, Service & Society Credits: 3
- EDAL 670 – Technology for Leaders Credits: 3
- INFS 510 – Management Information Systems Credits: 3
- LEAD 638 – Issues in Leadership Theory Credits: 2

Admissions Requirements

The Department of Medical Laboratory Sciences offers a graduate program leading to the Master of Science in Medical Laboratory Science. In response to the diversity of skills required by the medical laboratory scientist, the degree features a variety of program emphases, including laboratory sciences, laboratory leadership and administration, education, and laboratory mission and development

Admission requirements. In addition to the general requirements for admission to a graduate program listed in the graduate admission section of this bulletin, the following are departmental requirements:

- Applicants' previous course work must include 16 semester credits of biological sciences, 16 semester credits of chemistry, and one college–level course in mathematics. Deficiencies must be removed prior to admission to the graduate program.
- Applicants must have an overall GPA of at least 3.0 in undergraduate courses and at least 3.0 in the undergraduate cognate science (chemistry, biology, math and medical laboratory science) courses.
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- Students must receive United States professional certification before completing more than 9 graduate credits, and must meet the GPA requirements as stated above.

Individuals lacking United States professional certification may request to be admitted on a provisional basis while they pursue the course work required for eligibility to write the national certification examinations. These clinical courses and their prerequisites require a minimum of four academic semesters. The courses include:

For individuals lacking United States professional certification please see the required coursework found just before the list of Medical Laboratory Science Courses at the end of this section.

Medical Laboratory Science, Laboratory Mission & Development Emphasis MSMLS

Degree Requirements

In addition to meeting the general requirements for graduate degree programs, students must meet the following departmental requirements:

- Complete a minimum of 36 semester credits including the core of 20 semester credits and 16 semester credits selected from the chosen emphasis.
- Have the graduate program coordinator approve course selections and course sequencing. Students may substitute alternate courses listed in this Bulletin with the consent of the graduate program coordinator and the approval of the dean of the School of Health Professions.
- No grade lower than C is acceptable.
- Maintain a minimum cumulative GPA of 3.00 for the graduate portion of the program.
- Competency in statistics is required and is determined by the graduate program coordinator.

Core courses — 20 credits

Student must take the following courses:

- MLSC 500 – Foundations for Graduate Study in Medical Laboratory Science Credits: 1
- MLSC 501 – Seminar in Medical Laboratory Science Credits: 1
- MLSC 561 – Laboratory Management Issues and Strategies Credits: 3
- MLSC 562 – Issues in Laboratory Regulations and Practice Credits: 3
- MLSC 585 – Applied Studies in Medical Laboratory Science Credits: 5
- ACCT 501 – Survey of Accounting Credits: 2
- plus a minimum of 2–3 graduate religion credits selected in consultation with graduate program coordinator.

Choose one of the following courses:

- BSAD 500 – Survey of Management Credits: 2 **or**
- BSAD 515 – Organizational Behavior & Leadership Credits: 3

Laboratory Mission & Development Emphasis:

Required Courses

- BSAD 545 – International Business Management Credits: 3 **or**
- BSAD 560 – Intercultural Business Relations Credits: 3

- BSAD 620 – Christian Ethics, Service & Society Credits: 3 **or**
- MSSN 615 – Anthropology for Mission and Ministry Credits: 2–3

Additional courses to select from:

- ANTH 517 – Cultural and Developmental Anthropology Credits: 2
- LEAD 525 – Public Relations: Community Partnerships Credits: 2–3
- PSYC 515 – Organization and Human Resources Credits: 2
- SOCI 508 – Emergency Preparedness Credits: 2
- SOCI 545 – Program Implementation and Evaluation Credits: 2
- SOCI 560 – Family Resource Management Credits: 3

The following courses may be selected if not already taken as part of the required courses for the emphasis.

- BSAD 545 – International Business Management Credits: 3
- BSAD 560 – Intercultural Business Relations Credits: 3
- BSAD 620 – Christian Ethics, Service & Society Credits: 3
- MSSN 615 – Anthropology for Mission and Ministry Credits: 2–3

Admissions Requirements

The Department of Medical Laboratory Sciences offers a graduate program leading to the Master of Science in Medical Laboratory Science. In response to the diversity of skills required by the medical laboratory scientist, the degree features a variety of program emphases, including laboratory sciences, laboratory leadership and administration, education, and laboratory mission and development

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Medical Laboratory Science, Laboratory Science Emphasis MSMLS

Degree Requirements

In addition to meeting the general requirements for graduate degree programs, students must meet the following departmental requirements:

- Complete a minimum of 36 semester credits including the core of 20 semester credits and 16 semester credits selected from the chosen emphasis.
- Have the graduate program coordinator approve course selections and course sequencing. Students may substitute alternate courses listed in this Bulletin with the consent of the graduate program coordinator and the approval of the dean of the School of Health Professions.
- No grade lower than C is acceptable.
- Maintain a minimum cumulative GPA of 3.00 for the graduate portion of the program.
- Competency in statistics is required and is determined by the graduate program coordinator.

Core courses — 20 credits

Student must take the following courses:

- MLSC 500 – Foundations for Graduate Study in Medical Laboratory Science Credits: 1
- MLSC 501 – Seminar in Medical Laboratory Science Credits: 1
- MLSC 561 – Laboratory Management Issues and Strategies Credits: 3
- MLSC 562 – Issues in Laboratory Regulations and Practice Credits: 3
- MLSC 585 – Applied Studies in Medical Laboratory Science Credits: 5
- ACCT 501 – Survey of Accounting Credits: 2
- plus a minimum of 2–3 graduate religion credits selected in consultation with graduate program coordinator.

Choose one of the following courses:

- BSAD 500 – Survey of Management Credits: 2 **or**
- BSAD 515 – Organizational Behavior & Leadership Credits: 3

Laboratory Science Emphasis — 16 credits

Required Courses

- BCHM 421 – Biochemistry I Credits: 4
- BCHM 422 – Biochemistry II Credits: 3
- BCHM 430 – Biochemistry Lab Credits: 1
- BIOL 445 – Molecular Genetics Credits: 3

Additional courses to select from:

- BIOL 444 – Electron Microscopy in Biological Investigations Credits: 1
- BIOL 446 – Electron Microscopy Laboratory Credits: 2
- BIOL 455 – Medical Botany Credits: 3
- BIOL 530 – Molecular Laboratory Techniques Credits: 3
- BIOL 464 – Systems Physiology Credits: 4
- BIOL 465 – Histology Credits: 3
- BIOL 477 – Neurobiology Credits: 3

Admissions Requirements

The Department of Medical Laboratory Sciences offers a graduate program leading to the Master of Science in Medical Laboratory Science. In response to the diversity of skills required by the medical laboratory scientist, the degree features a variety of program emphases, including laboratory sciences, laboratory leadership and administration, education, and laboratory mission and development

Admission requirements. In addition to the general requirements for admission to a graduate program listed in the graduate admission section of this bulletin, the following are departmental requirements:

- Applicants' previous course work must include 16 semester credits of biological sciences, 16 semester credits of chemistry, and one college–level course in mathematics. Deficiencies must be removed prior to admission to the graduate program.
- Applicants must have an overall GPA of at least 3.0 in undergraduate courses and at least 3.0 in the undergraduate cognate science (chemistry, biology, math and medical laboratory science) courses.
- The Graduate Record Examination (GRE) is not required for admission but is required for GRE Scholarship consideration.
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- Students must receive United States professional certification before completing more than 9 graduate credits, and must meet the GPA requirements as stated above.

Individuals lacking United States professional certification may request to be admitted on a provisional basis while they pursue the course work required for eligibility to write the national certification examinations. These clinical courses and their prerequisites require a minimum of four academic semesters. The courses include:

For individuals lacking United States professional certification please see the required coursework found just before the list of Medical Laboratory Science Courses at the end of this section.

Course work requirements for national certification examination eligibility

This is required coursework for individuals lacking United States professional certification

- MLSC 210 – Fundamentals of Hematology and Hemostasis
- MLSC 230 – Fundamentals of Clinical Microbiology
- MLSC 240 – Fundamentals of Immunohematology
- MLSC 320 – Fundamentals of Immunology
- MLSC 350 – Fundamentals of Clinical Chemistry
- MLSC 400 – Specimen Procurement and Processing
- MLSC 401 – Clinical Year Seminar and Research Methodology
- MLSC 405 – Clinical Year Seminar and Research Project
- MLSC 411 – Hematology
- MLSC 412 – Hemostasis
- MLSC 413 – Clinical Hematology & Hemostasis Practicum
- MLSC 421 – Clinical Immunology and Molecular Diagnostics
- MLSC 423 – Clinical Immunology, Virology, and Molecular Diagnostics Practicum
- MLSC 431 – Clinical Bacteriology
- MLSC 432 – Clinical Mycology and Parasitology
- MLSC 433 – Clinical Microbiology Practicum
- MLSC 441 – Immunohematology
- MLSC 442 – Transfusion Medicine
- MLSC 443 – Clinical Immunohematology Practicum
- MLSC 451 – Clinical Chemistry I
- MLSC 452 – Clinical Chemistry II
- MLSC 453 – Clinical Chemistry Practicum
- MLSC 461 – Body Fluids
- MLSC 463 – Body Fluids Practicum
- MLSC 475 – Medical Laboratory Management Concepts
- MLSC 493 – Practicum Project

Allied Health

ALHE 440 – Topics in _____

Credits: 1–4
Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** permission of program director. **Repeatable:** Repeatable with different topics **College Code:** SHP

ALHE 480 – Practicum in _____

Credits: 4
Grade Mode: Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** permission of program director. **Repeatable:** Repeatable up to 12 credits **College Code:** SHP

Medical Laboratory Science

MLSC 105 – Introduction to Medical Laboratory Science

Credits: 1
Lectures and/or demonstrations presented by each of the departmental faculty members covering the major disciplines in clinical laboratory science. Weekly: 1 lecture **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

MLSC 110 – Medical Terminology

Credits: 1
An in–depth study of medical terms and abbreviations relating to diseases, disorders and drugs. Weekly: 1 lecture **Delivery:** Self–paced online course option available **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** permission of instructor. **College Code:** SHP

MLSC 210 – Fundamentals of Hematology and Hemostasis

Credits: 2
Introduces the production, maturation, function of normal blood cells and hemostasis. Selected routine manual hematology and hemostasis procedures are performed. Weekly: 3 lectures and 1 lab $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

MLSC 230 – Fundamentals of Clinical Microbiology

Credits: 3
Orientation to clinical microbiology; specimen selection, collection, and transport; microscopic evaluation; stains and sterilization techniques; media and incubation selections; identification of routine and non–routine microorganisms; susceptibility testing; automation and quality assurance. Weekly: 2 lectures and 2 labs $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** BIOL 165. **College Code:** SHP

MLSC 240 – Fundamentals of Immunohematology

Credits: 1
Introduces blood group antigen systems, antibody screening, antibody identification, and compatibility testing. Selected routine procedures are performed. Weekly: 3 lectures and 1 lab $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

MLSC 320 – Fundamentals of Immunology

Credits: 3
Innate and acquired immune systems of the human organism; immunoglobulin production, structure, function, and diversity; antigen characteristics, variety, and specific red cell groups; tolerance and memory; complement structure and function; cell mediated immunity function and regulation; autoimmune disorders; transplantation and tumor immunology; immunodeficiency disorders; principles and procedures of techniques used in modern immunology lab. Weekly: 3 lectures **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** BIOL 165. **College Code:** SHP

MLSC 350 – Fundamentals of Clinical Chemistry

Credits: 3
Clinical lab procedures, safety, application of statistical procedures in quality control, and principles of clinical laboratory instrumentation. Topics include carbohydrates, lipids, electrolytes, and hepatic function with selected pathologies. Weekly: 3 lectures and 1 lab $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** completed or currently enrolled in CHEM 131 or permission of instructor **College Code:** SHP

MLSC 400 – Specimen Procurement and Processing

Credits: 1
Clinical specimen collection and processing; point–of–care testing, professional ethics; phlebotomy practicum. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** permission of the program director. **College Code:** SHP

MLSC 401 – Clinical Year Seminar and Research Methodology

Credits: 0
Introduction to educational methodology, multicultural communication, professionalism, medical laboratory sciences literature review, research design and practice. Attendance to all sessions is required. A pass/fail grade is assigned. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Prerequisite(s):** permission of program director. **College Code:** SHP

MLSC 405 – Clinical Year Seminar and Research Project

Credits: 1
Introduction to team building, service outreach and professional development. Research in medical laboratory science under the direction of a departmental faculty member. Preparation and delivery of a written report and oral presentation on the research project. Attendance to all sessions is required. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** permission of program director. **College Code:** SHP

MLSC 411 – Hematology

Credits: 3
Cellular elements of the blood, their maturation, functions, and morphologies; abnormal and disease state hematologies; principles and procedures of routine and special hematology assay methodologies; correlation of patient conditions with results of hematology assay results. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC210 and permission of program director. **College Code:** SHP

MLSC 412 – Hemostasis

Credits: 1
Hemostasis systems, their function, interaction, and monitoring; correlation of hemostasis assay results with various disorders; thrombosis and anticoagulant therapy; principles and procedures of routine and special hemostasis assays. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC411 and permission of program director. **College Code:** SHP

MLSC 413 – Clinical Hematology & Hemostasis Practicum

Credits: 4
Professional health–care laboratory practicum; emphasis in patient–care application of hematology and hemostasis procedures. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC411, 412 and permission of program director. **College Code:** SHP

MLSC 421 – Clinical Immunology and Molecular Diagnostics

Credits: 2
Theory and application of immunologic/serologic and basic molecular techniques including detection, analyses and epidemiology. Emphasis on correlation of patient conditions with test results for viral and bacterial diseases and cancers. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC320 and permission of program director. **College Code:** SHP

MLSC 423 – Clinical Immunology, Virology, and Molecular Diagnostics Practicum

Credits: 1
Professional health–care laboratory practicum: emphasizes patient–care applications of immunology, serology, virology and molecular techniques. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC421 and permission of program director. **College Code:** SHP

MLSC 431 – Clinical Bacteriology

Credits: 4
Emphasis on specimen collection, culture, identification and clinical significance of bacterial pathogens. Simulated clinical practice for the separation of normal flora from pathogenic microorganisms encountered in various body sites including the study of antimicrobial susceptibility testing. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC230 and permission of program director. **College Code:** SHP

MLSC 432 – Clinical Mycology and Parasitology

Credits: 2
Study of fungi and parasites associated in human infections. Emphasis on specimen collection and preservation, culture and identification procedures. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC431 and permission of program director. **College Code:** SHP

MLSC 433 – Clinical Microbiology Practicum

Credits: 4
Professional health–care laboratory practicum; emphasis in patient–care applications of bacteriology, mycology and parasitology. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC431, MLSC432 and permission of program director. **College Code:** SHP

MLSC 441 – Immunohematology

Credits: 3
Blood grouping and typing; blood group antigen systems; compatibility testing; antibody identification; quality control and quality assurance; donor recruitment and selection; component preparation; blood–banking records; grouping and compatibility problem solving; patient clinical state correlations. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC240, MLSC320 and permission of program director. **College Code:** SHP

MLSC 442 – Transfusion Medicine

Credits: 2
In–depth study of immunohematology testing results, clinical patient manifestations, blood component therapy and blood product requirements. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC 441 and permission of program director. **College Code:** SHP

MLSC 443 – Clinical Immunohematology Practicum

Credits: 4
Professional health–care laboratory practicum; emphasis in patient–care applications of immunohematology. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC 441, MLSC 442 and permission of program director. **College Code:** SHP

MLSC 451 – Clinical Chemistry I

Credits: 4
Carbohydrate, lipid, enzyme, electrolyte, acid–base balance, trace element, protein systems, and gastric functions. Correlations with normal physiology and selected pathological conditions. Analysis of relevant blood and body fluids constituents. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC 350 and permission of program director. **College Code:** SHP

MLSC 452 – Clinical Chemistry II

Credits: 2
Liver function, renal function, endocrinology, toxicology, and therapeutic drug monitoring. Correlations with normal physiology and selected pathological conditions. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC 451 and permission of program director. **College Code:** SHP

MLSC 453 – Clinical Chemistry Practicum

Credits: 4
Professional health–care laboratory practicum. Emphasis on patient–care applications in clinical chemistry. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC 451, MLSC 452 and permission of program director. **College Code:** SHP

MLSC 461 – Body Fluids

Credits: 1
Analysis of various body fluids such as serous fluids, synovial fluids, amniotic fluid, and urine. Correlations with normal physiology and selected pathological conditions. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC 451 and permission of the program director. **College Code:** SHP

MLSC 463 – Body Fluids Practicum

Credits: 1
Professional health–care laboratory practicum. Emphasis in patient–care applications of body fluids. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** MLSC 461 and permission of program director. **College Code:** SHP

MLSC 475 – Medical Laboratory Management Concepts

Credits: 2
Discussion in selected areas that include health–care delivery systems; problem solving in the clinical laboratory; human resource management; supply and equipment acquisition; financial management performance standards and assessment; ethics; laboratory information systems; and regulatory processes. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** permission of the program director. **College Code:** SHP

MLSC 490 – Topics in _____

Credits: 1–4
An in–depth study of selected topics in the medical laboratory sciences. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** permission of program director. **Repeatable:** Repeatable with different topics **College Code:** SHP

MLSC 493 – Practicum Project

Credits: 1
Designed to be an integral component of the clinical year practica experience. Introduces students to the principles, practices, and performance of clinical laboratory projects expected of practicing professional medical laboratory scientists. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **College Code:** SHP

MLSC 495 – Independent Project

Credits: 1–4
Topics may be from areas relevant to clinical laboratory practice and must be approved by the Program director. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Prerequisite(s):** permission of program director. **Repeatable:** Repeatable with different topics **College Code:** SHP

MLSC 496 – Extended Clinical Practicum

Credits: 1
A twelve–week professional health–care laboratory practicum. Emphasis in patient–care applications. Subject areas are to be coordinated with the Clinical Site Education Coordinator and the program director. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Prerequisite(s):** successful completion of the 20–week clinical practica of the clinical–year program and permission of program director. **College Code:** SHP

MLSC 500 – Foundations for Graduate Study in Medical Laboratory Science

Credits: 1
Orientation designed for students to refine the skills needed for successful graduate work. Focus on academic and professional proficiencies such as critical thinking, principles of research, and scholarly writing. Written and oral presentation required. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** permission of graduate program coordinator. **College Code:** SHP

MLSC 501 – Seminar in Medical Laboratory Science

Credits: 1
Literature review of current laboratory science topics. A service–based activity addressing a relevant issue in laboratory science required. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** permission of graduate program coordinator. **College Code:** SHP

MLSC 561 – Laboratory Management Issues and Strategies

Credits: 3
The health–care environment is rapidly changing, and will continue to change for the foreseeable future. In the clinical laboratory, ever–changing government regulations and reimbursement policies require a laboratory manager to be flexible and adopt new skills. Issues faced by the manager and styles and strategies used to deal with these issues are explored. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** permission of graduate program coordinator. **College Code:** SHP

MLSC 562 – Issues in Laboratory Regulations and Practice

Credits: 3
Clinical laboratories are increasingly regulated by state, federal and other agencies. Applicable regulations will be examined and their impact on laboratory operations evaluated. A selected number of laboratory quality assurance procedures, as specified by CLIA '88 regulations, will be performed in the laboratory. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** Statistics and permission of graduate program coordinator. **College Code:** SHP

MLSC 585 – Applied Studies in Medical Laboratory Science

Credits: 5
Designed in consultation with and coordinated by the area specialty advisor. A proposal, cumulative report, presentation and defense required. Clinical placement depends on clinical site availability. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** Certification and/or licensure as a medical laboratory scientist and permission of graduate program coordinator. **College Code:** SHP

MLSC 595 – Independent Study/Readings/Research Project

Credits: 1–4
Topics may be from immunology, immunohematology, clinical chemistry, hematology, microbiology and other areas of patient–care science, clinical laboratory science education, management, or applications specially relevant to clinical laboratories. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Prerequisite(s):** permission of graduate program coordinator. **Repeatable:** Repeatable up to 4 credits with different topics **College Code:** SHP

MLSC 650 – Project Continuation

Credits: 0
Students may register for this course while clearing deferred grade (DG) and/or incomplete (I) courses with approval only. Registration for this course indicates full–time status. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **Special Approval:** Permission of the graduate program coordinator. **College Code:** SHP

MLSC 655 – Program Continuation

Credits: 0
Students may register for this non–credit continuation course to maintain active status. For additional information on active status, please refer to the School of Graduate Studies & Research. Registration does not indicate full–time status. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **College Code:** SHP

Nursing

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269–471–3311 or (800) 877–2863
nursing@andrews.edu
www.andrews.edu/nrsg/

Faculty
Karen A. Allen, *Chair, and Director of Graduate Programs*
Ruth D. Abbott
Nancy A. Carter, *Director of Undergraduate Admissions and Progressions*
Grace C. Chi
Henrietta H. Hanna, *Director of Undergraduate Curriculum*
Gisele D. Kuhn
Mary N. Ngugi
Arlene M. Saliba
Gisela E. Schmidt

Mission

The Andrews University Department of Nursing, a program based on Seventh–day Adventist precepts and Restoration to the Image of God, provides transformational nursing education which equips students to function as professional nurses in direct care, advanced practice, research, and education. Through the following activities, the Department of Nursing encourages students to seek knowledge, affirm faith, and provide changes that impact the world of healthcare:

Seek Knowledge
- Prepare nurses that provide culturally competent, high quality, evidence–based patient–centered care.
- Prepare nurses for first–time licensing and certification success.
- Encourage lifelong learning.

Affirm Faith
- Prepare nurses to practice within the Christian context of "Restoration to the Image of God."
- Promote personal spiritual growth.
- Teach theoretical underpinning of wellness, illness, and disease within the context of the Great Controversy.

Change the World
- Teach with service/mission focus, medical evangelism.
- Teach current whole–person nursing care across the life span which addresses wellness and illness.
- Prepare nurse leaders with a mind set for professional and ethical practice which incorporates communication (all venues), teamwork and collaboration.

Vision

To prepare professional nurses to reflect Christian spirituality, caring attitudes, clinical excellence, and cultural competence for service and practice in concert with the four main initiatives from the Institute of Medicine and the Robert Wood Johnson Foundation's report on the Future of Nursing (October 5, 2010):
- Nurses should practice to the full extent of their education and training.
- Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.
- Nurses should be full partners, with physicians and other health care professionals, in redesigning health care in the United States.
- Effective workforce planning and policy making require better data collection and information infrastructure.

Program Accreditation

The Andrews University Nursing program is approved by the Michigan Board of Nursing and holds accreditation from the National League for Nursing Accrediting Commission* (NLNAC).
* NLNAC
3343 Peachtree Rd NE, Suite 500
Atlanta GA 30326
Phone: 800–669–1656

Bachelors

Nursing, (Completion) BS

For information, contact: Myrna Araujo–Constantine, myrnac@andrews.edu, 269–471–3311

BS: Completion provides the RN with an associate degree an opportunity to complete their Bachelor of Science degree. The curriculum focuses on the professional and leadership roles of the BS–prepared nurse. As students come from varying school backgrounds, the program of completion is individualized. Normally students complete in two to three years (4–6 semesters). The program requirements will involve clinical activities that cannot be carried out in the student's normal work setting.

Delivery: This program is offered on campus.

Nursing Major Requirements—34

RN's without recognized academic credit in nursing may obtain credit by successfully passing the NLN Upward Mobility Profile II Tests, or an acceptable option. These tests passed at the recommended score would count toward the 31 credits of lower–division nursing credits (although not counted in the GPA).
- NRSG 305 – Health Assessment Credits: 3
- NRSG 315 – Pathophysiology Credits: 3
- NRSG 320 – Professional Nursing Concepts for the RN Credits: 3
- NRSG 366 – Complementary Wellness and Restoration I Credits: 1
- NRSG 408 – Families in Stress and Crisis Credits: 2
- NRSG 414 – Critical Care Nursing Credits: 3
- NRSG 418 – Leadership in Nursing Credits: 3
- NRSG 438 – Intercultural Mission Service in Nursing Credits: 2
- NRSG 445 – Nursing Research Credits: 3–4 (4 credits required for program)
- NRSG 450 – Community Nursing Credits: 4
- NRSG 466 – Complementary Wellness and Restoration II Credits: 2–3 (3 credits required for program)
- NRSG 480 – Senior Nursing Internship Credits: 3

Admission Requirements

Application for admission may require a minimum of six weeks for processing evaluation. Deadline for applications is May 1 to be considered for entry into the nursing program in the Fall Semester.
1. Minimal overall GPA of 3.00
2. An acceptable criminal background check from company recommended by Department of Nursing—to include Berrien County.
3. Physical examination report that must include:
   a. Tuberculin skin test (if positive a chest x–ray is required, will be evaluated individually) and yearly evaluation thereafter
   b. Proof of immunization or serum immunity for MMR1 and MMR2 (measles, mumps, rubella, rubeola), T–dap (Tetanus, Diptheria, Pertussin), and hepatitis B
   c. Proof of either having had chickenpox (dates of disease or tested for varicella–zoster antibodies) or the immunization
4. Meeting the minimum requirements does not guarantee admission.
5. Current licensure as an RN in the United States or equivalent accreditation in country of residence.

Orientation

- Required Webinar or Adobe Connect session. (Time will be scheduled.)

Progression

All undergraduate nursing students need to understand that:
- Nursing courses must be taken in the required sequence.
- A percentage as stated in the department handbook is required to pass each nursing course.
- A test average as stated in the department handbook is required for identified nursing courses.
- No grade lower than a B– is accepted in any undergraduate nursing course.
- A minimum GPA of 3.00 is required for cumulative cognate GPA (with no grade lower than a C in any cognate) and cumulative overall GPA.
- Independent study courses cannot replace required nursing courses.
- Students wishing to transfer in nursing credits must have course work evaluated by the Nursing Department—Admissions and Progression's Committee. (Please allow a minimum of six weeks prior to the beginning of classes for evaluation.)
- Annual flu shots are required.
- Maintaining a current certification of the American Heart Association Health Care Provider CPR course.
- There is an annual review of required health care competencies. (See Handbook for specifics)

- Any student on a Leave of Absence for two years or more, must have a readmission reevaluation of both clinical and theoretical knowledge.
- Class attendance is required: The Department of Nursing will uphold University Policy.
- Clinical attendance is required: See p. 20 and p. 21 of the Department of Nursing Handbook.
- Student will be asked to withdraw from the nursing program if one or more nursing courses are failed at any time.
- Students have the right to reapply to the program.
- Readmission will be considered on an individual basis.
- Student will be required to show competence via a standardized external exam and remediation before progressing to certain classes.
- Academic performance alone does not ensure completion of the nursing preparation. Students must also continuously meet acceptable professional ethics, disposition and safety standards as determined by the admissions and progressions committee.
- Finger printing is required.
- A urine drug screen must be completed 20–30 days prior to the start of the first clinical rotation.
- Annual flu shots are required.

Practicum

Undergraduate nursing practicum: In nursing classes with a practicum, a ratio of four clinical hours will be required for each semester credit. For example, a 1–credit practicum meets for 60 clock hours, a 2–credit practicum course meets for 120 clock hours, a 1–credit lab meets for 30 clock hours. Practicum hours are indicated in the bulletin in the course description.

Nursing, (Completion) Online BS

For information, contact: Myrna Araujo–Constantine, myrnac@andrews.edu, 269–471–3311

BS: Completion provides the RN with an associate degree an opportunity to complete their Bachelor of Science degree. The curriculum focuses on the professional and leadership roles of the BS–prepared nurse. As students come from varying school backgrounds, the program of completion is individualized. Normally students complete in two to three years (4–6 semesters). The program requirements will involve clinical activities that cannot be carried out in the student's normal work setting.

Delivery: This program is offered in an interactive online format (see School of Distance Education Definitions). In the interactive online format, courses have specific start and end dates. The interactive online program does not require any time on campus. Students in the interactive online program are encouraged to come to campus for graduation. Tuition for the interactive online degree is 50% of regular tuition.

Nursing Major Requirements – 34

RN's without recognized academic credit in nursing may obtain credit by successfully passing the NLN Upward Mobility Profile II Tests, or an acceptable option. These tests passed at the recommended score would count toward the 31 credits of lower–division nursing credits (although not counted in the GPA).

- NRSG 305 – Health Assessment Credits: 3
- NRSG 315 – Pathophysiology Credits: 3
- NRSG 320 – Professional Nursing Concepts for the RN Credits: 3
- NRSG 366 – Complementary Wellness and Restoration I Credits: 1
- NRSG 408 – Families in Stress and Crisis Credits: 2
- NRSG 414 – Critical Care Nursing Credits: 3
- NRSG 418 – Leadership in Nursing Credits: 3
- NRSG 438 – Intercultural Mission Service in Nursing Credits: 2
- NRSG 445 – Nursing Research Credits: 3–4
- NRSG 450 – Community Nursing Credits: 4
- NRSG 466 – Complementary Wellness and Restoration II Credits: 2–3
- NRSG 480 – Senior Nursing Internship Credits: 3

Admission Requirements

Application for admission may require a minimum of six weeks for processing evaluation. Deadline for applications is May 1 to be considered for entry into the nursing program in the Fall Semester.

1. Minimal overall GPA of 3.00
2. An acceptable criminal background check from company recommended by Department of Nursing—to include Berrien County.
3. Physical examination report that must include:
   a. Tuberculin skin test (if positive a chest x–ray is required, will be evaluated individually) and yearly evaluation thereafter
   b. Proof of immunization or serum immunity for MMR1 and MMR2 (measles, mumps, rubella, rubeola), T–dap (Tetanus, Diptheria, Pertussin), and hepatitis B
   c. Proof of either having had chickenpox (dates of disease or tested for varicella–zoster antibodies) or the immunization
4. Meeting the minimum requirements does not guarantee admission.
5. Current licensure as an RN in the United States or equivalent accreditation in country of residence.

Orientation

- Required Webinar or Adobe Connect session. (Time will be scheduled.)

Progression

All undergraduate nursing students need to understand that:

- Nursing courses must be taken in the required sequence.
- A percentage as stated in the department handbook is required to pass each nursing course.
- A test average as stated in the department handbook is required for identified nursing courses.
- No grade lower than a B– is accepted in any undergraduate nursing course.
- A minimum GPA of 3.00 is required for cumulative cognate GPA (with no grade lower than a C in any cognate) and cumulative overall GPA.
- Independent study courses cannot replace required nursing courses.
- Students wishing to transfer in nursing credits must have course work evaluated by the Nursing Department—Admissions and Progression's Committee. (Please allow a minimum of six weeks prior to the beginning of classes for evaluation.)
- Annual flu shots are required.
- Maintaining a current certification of the American Heart Association Health Care Provider CPR course.
- There is an annual review of required health care competencies. (See Handbook for specifics)
- Any student on a Leave of Absence for two years or more, must have a readmission reevaluation of both clinical and theoretical knowledge.
- Class attendance is required: The Department of Nursing will uphold University Policy.
- Clinical attendance is required: See p. 20 and p. 21 of the Department of Nursing Handbook.
- Student will be asked to withdraw from the nursing program if one or more nursing courses are failed at any time.
- Students have the right to reapply to the program.
- Readmission will be considered on an individual basis.
- Student will be required to show competence via a standardized external exam and remediation before progressing to certain classes.
- Academic performance alone does not ensure completion of the nursing preparation. Students must also continuously meet acceptable professional ethics, disposition and safety standards as determined by the admissions and progressions committee.
- Finger printing is required.
- A urine drug screen must be completed 20–30 days prior to the start of the first clinical rotation.
- Annual flu shots are required.

Practicum

Undergraduate nursing practicum: In nursing classes with a practicum, a ratio of four clinical hours will be required for each semester credit. For example, a 1–credit practicum meets for 60 clock hours, a 2–credit practicum course meets for 120 clock hours, a 1–credit lab meets for 30 clock hours. Practicum hours are indicated in the bulletin in the course description.

Nursing, (NCLEX–preparatory) BS

This is an eight–semester nursing program planned to cover four academic years. The curriculum focuses on the provision of care and the promotion of health for individuals and families. Students gain proficiency through both class (theory) and laboratory (practicum/clinical) experiences in a variety of settings. To receive a strong and varied clinical experience, students travel to nearby hospitals and community agencies and work with clients of varied socio–economic groups. Each student is responsible for providing or arranging her/his own transportation for clinical practica.

Students may enter the university as declared nursing majors, but the first year is typically spent in general education requirements, and cognate courses. While

taking NRSG 215 – Introduction to Professional Nursing Concepts, students are encouraged to apply for entrance into the nursing program prior to completion of the spring semester of their freshman year. Transfer students will take NRSG 215 – Introduction to Professional Nursing Concepts in the Spring Semester of their Sophomore year. The deadline for application is May 1.

Total Credits: 125

Nursing Major Requirements—65

- NRSG 211 – Nursing Pharmacology I Credits: 2
- NRSG 212 – Nursing Pharmacology II Credits: 3
- NRSG 215 – Introduction to Professional Nursing Concepts Credits: 1
- NRSG 216 – Fundamentals of Nursing Theory and Practice Credits: 5
- NRSG 240 – Psychiatric–Mental Health Nursing Credits: 4
- NRSG 305 – Health Assessment Credits: 3
- NRSG 315 – Pathophysiology Credits: 3
- NRSG 331 – Medical–Surgical I Credits: 5
- NRSG 332 – Medical–Surgical II Credits: 6
- NRSG 366 – Complementary Wellness and Restoration I Credits: 1
- NRSG 408 – Families in Stress and Crisis Credits: 2
- NRSG 414 – Critical Care Nursing Credits: 3
- NRSG 416 – Comprehensive Overview Credits: 2
- NRSG 418 – Leadership in Nursing Credits: 3
- NRSG 430 – The Childbearing Family Credits: 4
- NRSG 438 – Intercultural Mission Service in Nursing Credits: 2
- NRSG 440 – The Developing Child Credits: 4
- NRSG 445 – Nursing Research Credits: 3–4 (3 credits required for program)
- NRSG 450 – Community Nursing Credits: 4
- NRSG 466 – Complementary Wellness and Restoration II Credits: 2–3 (2 credits required for program)
- NRSG 480 – Senior Nursing Internship Credits: 3

Required cognates—22

- BIOL 221 – Anatomy and Physiology I Credits: 4
- BIOL 222 – Anatomy and Physiology II Credits: 4
- BIOL 260 – General Microbiology Credits: 4
- CHEM 110 – Introduction to Inorganic and Organic Chemistry Credits: 4
- FDNT 230 – Nutrition Credits: 3 (credits counted in general education requirements)
- PSYC 101 – Introduction to Psychology Credits: 3 (credits counted in general education requirements)
- PSYC 301 – Human Development—Lifespan Credits: 3
- STAT 285 – Elementary Statistics Credits: 3

Note:

*Please note that if any cognates (Anatomy & Physiology, Human Development, Microbiology, Nutrition, Psychology, Statistics) are older than five years they will not be accepted as credit (exception for RNs) and will need to be retaken as a class for credit or the student may take a standardized challenge exam, such as the CLEP exam as approved by the Department of Nursing.

General Education Requirements—38

See Professional Education Requirements and note the following **specific** requirements:

Religion:

professional degree requirements

Language/Communication:

professional degree requirements

History:

professional degree requirements

Fine Arts/Humanities:

professional degree requirements

Life/Physical Sciences:

- FDNT 230 – Nutrition Credits: 3

Mathematics:

- MATH 145 – Reasoning with Functions Credits: 3

Service:

Field service credit requirements are met in these classes.

- NRSG 438 – Intercultural Mission Service in Nursing Credits: 2
- NRSG 450 – Community Nursing Credits: 4

Social Sciences:

- PSYC 101 – Introduction to Psychology Credits: 3

Fitness Education:

professional degree requirements

Additional Requirements

All NCLEX–preparatory students accepted into the nursing program will:

1. Be asked to seek experience in a hospital acute care setting as a nursing assistant, nursing technician or the equivalent, for approximately 380 hours while enrolled in the nursing program. The majority of these hours can be done over the summer. The breakdown of hours is as follows:
   - 75–80 hours prior to beginning NRSG 331 – Medical–Surgical I
   - Externship or equivalent hospital designed experience during the summer after completing NRSG 332 – Medical–Surgical II and prior to entering NRSG 430/NRSG 440 The Childbearing Family and The Developing Child (hours will vary, but a min. of 300)

International students who are at Andrews University on F–1 student visa, must obtain government authorization for paid employment. The Andrews University Office of International Student Services will facilitate the job petition to work in a healthcare facility in order to meet the program requirements. Students may not be allowed to progress in the nursing program unless these qualifications are met, except by approval of faculty. A form signed by the facility where the student works must be submitted to their advisor prior to registering for fall courses.

2. Be expected to complete the NCLEX–preparatory program within 3–4 years, beginning with NRSG 216 – Fundamentals of Nursing Theory and Practice.

Admission Requirements

Application for admission may require a minimum of six weeks for processing evaluation. The deadline for applications is May 1 to be considered for entry into the nursing program in the Fall Semester.

1. Minimal overall GPA of 3.00
2. BIOL 221, BIOL 222, CHEM 110 FDNT 230, PSYC 101, PSYC 301, Minimal combined GPA for cognates of 3.00. A grade of C– is unacceptable for any cognate course.
3. Acceptable SAT or ACT Math scores or a higher level math class with a grade of C or better.
4. Nelson Denny Reading Test score of 15 or greater
5. An acceptable criminal background check from company recommended by Department of Nursing—to include Berrien County.
6. Physical examination report that must include:
   a) Tuberculin skin test (if positive a chest x–ray is required, will be evaluated individually) and yearly evaluation thereafter
   b) b. Proof of immunization or serum immunity for MMR1 and MMR2 (measles, mumps, rubella, rubeola), T–dap (Tetanus, Diptheria, Pertussin), and hepatitis B
   c) c. Proof of either having had chickenpox (dates of disease or tested for varicella–zoster antibodies) or the immunization
7. Must complete KAPLAN Pre–Admission exam with pre–established score as determined by the Department of Nursing.
8. Meeting the minimum requirements does not guarantee admission.

Orientation

All students admitted into the nursing program will be required to complete a 2–day orientation before beginning the Fall Semester. During this process, they will be required to do:

- Finger printing.
- A urine drug screen that must be completed 20–30 days prior to the start of the first clinical rotation (check with the Nursing Office).
- Show proof of CPR Certification of an American Heart Association Healthcare Provider course.

Progression

All undergraduate nursing students need to understand that:

- Nursing courses must be taken in the required sequence.
- A percentage as stated in the department handbook is required to pass each nursing course.
- A test average as stated in the department handbook is required for identified nursing courses.
- No grade lower than a B– is accepted in any undergraduate nursing course.
- A minimum GPA of 3.00 is required for cumulative cognate GPA (with no grade lower than a C in any cognate) and cumulative overall GPA.
- Independent study courses cannot replace required nursing courses.
- Students wishing to transfer in nursing credits must have course work evaluated by the Nursing Department—Admissions and Progression's Committee. (Please allow a minimum of six weeks prior to the beginning of classes for evaluation.)
- Annual flu shots are required.
- Maintaining a current certification of the American Heart Association Health Care Provider CPR course is required.
- There is an annual review of required health care competencies. (See Handbook for specifics)
- Any student on a Leave of Absence for two years or more, must have a readmission reevaluation of both clinical and theoretical knowledge.
- Class attendance is required: The Department of Nursing will uphold University Policy.
- Clinical attendance is required: See p. 20 and p. 21 of the Department of Nursing Handbook.
- Student will be asked to withdraw from the nursing program if one or more nursing courses are failed at any time.
- Students have the right to reapply to the program.
- Readmission will be considered on an individual basis.
- Student will be required to show competence via a standardized external exam and remediation before progressing to certain classes.
- Academic performance alone does not ensure completion of the nursing preparation. Students must also continuously meet acceptable professional ethics, disposition and safety standards as determined by the admissions and progressions committee.

Practicum

Undergraduate nursing practicum: In nursing classes with a practicum, a ratio of four clinical hours will be required for each semester credit. For example, a 1–credit practicum meets for 60 clock hours, a 2–credit practicum course meets for 120 clock hours, a 1–credit lab meets for 30 clock hours. Practicum hours are indicated in the bulletin in the course description.

Masters

Nursing, (Education) MS

For information, contact: Leigh Everhart, everhal@andrews.edu, 269–471–3312
MS: Building upon a BS in nursing this graduate nursing program requires five semesters of study for Registered Nurses. A research utilization project that is education focused is required. This program includes practicum hours in an appropriate setting.

Core Classes—15

- NRSG 510 – Christian Ministry Credits: 2
- NRSG 517 – Health Care Systems Credits: 3
- NRSG 530 – Health Promotion/Disease Prevention Credits: 3
- NRSG 580 – Nursing Theory and Application Credits: 2
- NRSG 655 – Research Utilization Credits: 3
- NRSG 698 – Research Utilization Project Credits: 2

Nurse Education—23

- NRSG 515 – Teaching Strategies Credits: 3
- NRSG 548 – Advanced Pathophysiology Credits: 3
- NRSG 555 – Advanced Health Assessment Credits: 2
- NRSG 638 – Interpersonal Dynamics Credits: 2
- NRSG 658 – Learning Theory and Health Teaching Credits: 2
- NRSG 660 – Curricular Development Credits: 2
- NRSG 665 – Nursing Education Outcomes Credits: 3
- NRSG 668 – Roles in Nursing Education Credits: 2
- NRSG 680 – Teaching Practicum Credits: 4

Interactive Online Programs

This is a fully interactive online program only (see School of Distance Education Definitions). The courses follow fixed enrollment with semester start and end dates. Participants interact with each other and with instructor throughout all courses. This program does not require any time on campus. Students are encouraged to come to campus for graduation.

Admission Requirements

In addition to the general admission requirements in the Graduate Admissions section of the University bulletin, certain departmental requirements should be noted:

1. BS: Nursing degree from an NLNAC or CCNE accredited school or equivalent licensure in country of residence.
2. Completion of GRE Exam as per University requirements.
3. Overall graduate GPA of 3.25.
4. Current licensure as an RN in the United States or equivalent accreditation in country of residence.
5. Undergraduate course in statistics.
6. Positive recommendations by present or recent employers.

Applicants who fail to meet any of the above may be admitted only after committee consideration of the specific circumstances. Additional course work may be required.

Progression

All graduate nursing students need to understand that:

- Graduate nursing courses must be taken in the required sequence.
- No grade lower than a B is accepted at the graduate level.
- One credit of practicum is equal to 75 literal clock hours.
- Academic performance alone does not ensure completion of the nursing preparation. Students must also continuously meet acceptable professional ethics, disposition and safety standards as determined by the practicum site.

Certificates

Nursing, (Certificate) Post–MS

For information, contact: Leigh Everhart, everhal@andrews.edu, 269–471–3312. This program is for nurses (RN's) who have a master's degree in nursing and wish to focus on nursing education. See Financial Information section for examination fees.

Post–MS Nursing Education Certificate Requirements—16

- NRSG 515 – Teaching Strategies Credits: 3
- NRSG 658 – Learning Theory and Health Teaching Credits: 2
- NRSG 660 – Curricular Development Credits: 2
- NRSG 665 – Nursing Education Outcomes Credits: 3
- NRSG 668 – Roles in Nursing Education Credits: 2
- NRSG 680 – Teaching Practicum Credits: 4

Admission Requirements

In addition to the general admission requirements in the Graduate Admissions section of the University bulletin, certain departmental requirements should be noted:

1. MS: Nursing degree from an NLNAC or CCNE accredited school or equivalent licensure in country of residence.

2. Completion of GRE Exam as per University requirements.
3. Overall graduate GPA of 3.25.
4. Current licensure as an RN in the United States or equivalent accreditation in country of residence.
5. Positive recommendations by present or recent employers.
6. Applicants who fail to meet any of the above may be admitted only after committee consideration of the specific circumstances. Additional course work may be required.

Interactive Online Programs

This is a fully interactive online program only (see School of Distance Education Definitions). The courses follow fixed enrollment with semester start and end dates. Participants interact with each other and with instructor throughout all courses. This program does not require any time on campus. Students are encouraged to come to campus for graduation.

Progression

All graduate nursing students need to understand that:

- Graduate nursing courses must be taken in the required sequence.
- No grade lower than a B is accepted at the graduate level.
- One credit of practicum is equal to 75 literal clock hours.
- Academic performance alone does not ensure completion of the nursing preparation. Students must also continuously meet acceptable professional ethics, disposition and safety standards as determined by the practicum site.

Nursing

NRSG 211 – Nursing Pharmacology I

Credits: 2
Beginning nursing knowledge related to pharmacology, medication administration, and related monitoring of therapeutic and non–therapeutic patient response that builds a foundation for safe practice. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** NRSG 216 **College Code:** SHP

NRSG 212 – Nursing Pharmacology II

Credits: 3
A continuation of pharmacology principles that examines major classifications of medications. Focuses on uses, dosages, therapeutic and non–therapeutic effects, interactions, and nursing interventions. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 211 or permission of the Department of Nursing. **Offering:** Fall **College Code:** SHP

NRSG 215 – Introduction to Professional Nursing Concepts

Credits: 1
Introduces students to nursing history, mission, standards, language and critical thinking, and applies principles from the Department of Nursing conceptual framework, "Restoration to the Image of God," along with other key nursing concepts. Must be taken spring semester of freshman year. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Offering:** Spring **College Code:** SHP

NRSG 216 – Fundamentals of Nursing Theory and Practice

Credits: 5
Integrates the nursing process into basic nursing skills, medication administration, and assessment of the adult client; with special emphasis on older adults. Includes 3 credits theory and 2 credits practicum. $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** BIOL 221, BIOL 222, PSYC 101, PSYC 301, FDNT 230, NRSG 215 or permission of the Department of Nursing. **Offering:** Fall **College Code:** SHP

NRSG 240 – Psychiatric–Mental Health Nursing

Credits: 4
Presents the nurse's role in facilitation of mental health and prevention, assessment and management of mental illness. Includes 3 credits theory and 1 credit practicum. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 211, NRSG 216, PSYC 101 or permission of the Department of Nursing. **Offering:** Spring **College Code:** SHP

NRSG 305 – Health Assessment

Credits: 3
Introduces theoretical and practical skills for performing a focused and comprehensive health assessment. Emphasizes data collection for recognition of normal findings and common variations throughout the life span, and use of nursing diagnoses to describe areas needing restoration. Includes 2 credits theory and 1 credit lab. **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 216 or RN, LPN; BIOL 221, BIOL 222 or permission of the Department of Nursing. **Offering:** Spring **College Code:** SHP

NRSG 315 – Pathophysiology

Credits: 3
Explores physiological adaptations and changes that occur due to chronic and acute illnesses. Provides etiology of disease states to use as a basis for nursing interventions. **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** NRSG 216. **Prerequisite(s):** BIOL 221, BIOL 222. **Offering:** Fall **College Code:** SHP

NRSG 320 – Professional Nursing Concepts for the RN

Credits: 3
Introduces and applies principles from the Department of Nursing conceptual framework, "Restoration to the Image of God," along with other key nursing concepts, and bridges educational preparation and role expectation of the associate degree nurse for functioning at the professional level. Must be taken during the first year of schooling by BS–completion students. (Needs to be taken before 418 and 450.) **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

NRSG 331 – Medical–Surgical I

Credits: 5
Integrates and applies the nursing process to prevent disease, manage, promote, restore or maintain health for adult clients with acute and chronic medical–surgical conditions. Includes 3 credits theory and 2 credits practicum. $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 211, NRSG 240, NRSG 305, NRSG 315. **Offering:** Fall **College Code:** SHP

NRSG 332 – Medical–Surgical II

Credits: 6
Integrates and applies the nursing process to restore health, manage disease, and/or provide end–of–life care for adult clients and their families with acute medical–surgical conditions, in acute and critical–care settings. Includes 4 credits theory and 2 credits practicum. $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 212, NRSG 331. **Offering:** Spring **College Code:** SHP

NRSG 366 – Complementary Wellness and Restoration I

Credits: 1
Introduces the use of complementary therapies in disease prevention, and health promotion and maintenance towards restoration of clients, families and communities. Specific attention is given to the eight natural laws of health. **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

NRSG 408 – Families in Stress and Crisis

Credits: 2
Utilizes family systems and other theories as a basis for understanding family functioning. Prepares the students to be able to assess and intervene with families experiencing stress and/or crises. **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** NRSG 331 or permission of the Department. **Offering:** Fall **College Code:** SHP

NRSG 414 – Critical Care Nursing

Credits: 3
Focuses on the needs of clients with life–threatening conditions in an acute care setting; which may present in multiple body systems. Special needs of pediatric and elderly clients addressed as well. **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 332 for NCLEX–preparatory students, NRSG 315, NRSG 408, NRSG 430, NRSG 440. **Offering:** Spring **College Code:** SHP

NRSG 416 – Comprehensive Overview

Credits: 2
Review of knowledge to serve as preparation of pre–licensure students for the NCLEX. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 430, NRSG 440. **Offering:** Spring **College Code:** SHP

NRSG 418 – Leadership in Nursing

Credits: 3
Provides opportunity for the student to gain knowledge in nursing leadership. Promotes the utilization of restorative principles in leadership theory and practice. Prepares students for leadership roles in all areas of nursing, and instills the pursuit of lifelong learning and professional development. **Delivery:** Interactive online option available **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 332; or NRSG 320. **Offering:** Fall **College Code:** SHP

NRSG 430 – The Childbearing Family

Credits: 4
Emphasizes restorative and evidence–based nursing care of the childbearing family throughout preconception, pregnancy, postpartum, and the neonatal period with an added focus on women's health issues. Includes 3 credits theory and 1 credit practicum. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 332, PSYC 301. **Offering:** Fall **College Code:** SHP

NRSG 438 – Intercultural Mission Service in Nursing

Credits: 2
* Field service credit requirements are met in this class. Prepares students to apply principles of the Andrews University Department of Nursing conceptual framework, "Restoration to the Image of God," while providing Christian nursing care and service in a worldwide context. Course includes principles and preparation for intercultural nursing practice. **Course Attribute:** Service course **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 430, NRSG 440; or NRSG 414. **Offering:** Spring **College Code:** SHP

NRSG 440 – The Developing Child

Credits: 4
Emphasizes an evidence–based nursing practice in both the maintenance and restorative health needs of the growing and developing child, from newborn through adolescence. Includes 3 credits theory and 1 credit practicum. $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 332, PSYC 301. **Offering:** Fall **College Code:** SHP

NRSG 445 – Nursing Research

Credits: 3–4
Provides foundational concepts on the research process and steps for utilizing research with the focus being on evidence–based practice. Introduces nursing perspectives related to critical thinking, scientific methods, ethical concerns, and search techniques necessary to the research process. **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 331 or NRSG 320; or permission of the Department of Nursing. (BS – Completion students take the class for 4 credits.) **Offering:** Spring **College Code:** SHP

NRSG 450 – Community Nursing

Credits: 4
* Field service credit requirements are met in this class. Focuses on community as the primary client, in contrast with community as the setting for individual care. Students consider factors affecting the wellbeing, function, and/or existence of the community and its response to those problems. Includes 2 credits theory and 2 credits practicum. $ – Course or lab fee **Course Attribute:** Service course **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 418, NRSG 430, NRSG 440; for BS – Completion NRSG 320, and NRSG 418. **Offering:** Spring **College Code:** SHP

NRSG 460 – Topics in _____

Credits: 1–3
Study of selected topics relevant to professional nursing practice. Subject and credits to be announced in advance. **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable **College Code:** SHP

NRSG 466 – Complementary Wellness and Restoration II

Credits: 2–3
An in–depth exploration of complementary therapies that can be utilized in conjunction with traditional therapies to assist clients with a chronic illness or high acuity need towards restoration to the image of God in wellness, health maintenance and disease management. **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** NRSG 414 **Prerequisite(s):** NRSG 366, NRSG 418 or permission of the Department of Nursing. (BS – Completion students take the class for 3 credits.) **Offering:** Spring **College Code:** SHP

NRSG 478 – Study Tour:

Credits: 0
Travel to selected areas combined with lectures, directed readings, projects and assignments. The amount of credit and the geographic area are designated at the time a study tour is announced. Fee may be required. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **College Code:** SHP

NRSG 480 – Senior Nursing Internship

Credits: 3
A capstone practicum that integrates nursing skills and knowledge with principles of daily practice. Takes place in acute care settings where the student manages groups of clients in conjunction with a preceptor (120 clock hours). Includes 1 credit seminar and 2 credits practicum. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Corequisite(s):** NRSG 414, NRSG 450. **Prerequisite(s):** NRSG 418, NRSG 430, NRSG 440. **Offering:** Spring **College Code:** SHP

NRSG 495 – Independent Study_____

Credits: 1
Grade Mode: Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable **College Code:** SHP

NRSG 510 – Christian Ministry

Credits: 2
Explores spiritual needs within the context of health and illness and the incorporation of spiritual beliefs into the plan of care. Includes an assessment of how the client and one's own individual spirituality affects health care behaviors. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Offering:** Spring **College Code:** SHP

NRSG 515 – Teaching Strategies

Credits: 3
Explores the knowledge and competencies needed to develop and apply evidence based innovative teaching strategies in the classroom and clinical settings. Strategies for distance and web–based learning are also included. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

NRSG 517 – Health Care Systems

Credits: 3
Examines the organizational structure of health–care systems in the United States and other countries. Alternative approaches for the delivery of health care are compared with consideration of quality–related, economical, and ethical concerns. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

NRSG 530 – Health Promotion/Disease Prevention

Credits: 3
Explores theories of health promotion and disease prevention at the advanced practice level with emphasis on patient education, epidemiology, health beliefs, and the seven laws of health. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

NRSG 548 – Advanced Pathophysiology

Credits: 3
An in–depth study of select pathophysiology concepts which will enable nurses to critically evaluate therapeutic strategies for maintenance and achievement of restoration. Age–related and ethnic variations will be explored. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Offering:** Spring **College Code:** SHP

NRSG 555 – Advanced Health Assessment

Credits: 2
Develop advanced assessment skills necessary to teach the skills to others as they restore clients of various ethnic groups to health and identify risk factors for illness of particular cultural groups. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 510, NRSG 517, NRSG 548, NRSG 638. **Offering:** Fall **College Code:** SHP

NRSG 580 – Nursing Theory and Application

Credits: 2
Examines theories and conceptual frameworks of nursing, ethics, leadership, models for providing care, and Restoration to the Image of God in regards to advanced practice of nursing. Explores feasibility, conceptual integrity, and congruence with personal values. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 510, NRSG 517, NRSG 638. **Offering:** Fall **College Code:** SHP

NRSG 638 – Interpersonal Dynamics

Credits: 2
Provides graduate nursing students with advanced knowledge related to underlying interpersonal concepts, skills, and practical 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. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

NRSG 655 – Research Utilization

Credits: 3
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. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 510, NRSG 517, NRSG 580, NRSG 638, NRSG 658, NRSG 660. **Offering:** Spring **College Code:** SHP

NRSG 658 – Learning Theory and Health Teaching

Credits: 2
Provides advanced practice nurses with evidence based knowledge regarding educational theories and their application in academic and clinical settings for successful instruction and teaching of clients, community, nursing students and other healthcare professionals. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 510, NRSG 517, NRSG 638. **Offering:** Fall **College Code:** SHP

NRSG 660 – Curricular Development

Credits: 2
Provides students with knowledge related to analysis, development or design, and redesign or improvement, and evaluation of client, student, or professional nursing curricula. Instruction on principles and procedures for curricular development will be addressed. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 510, NRSG 517, NRSG 638. **Offering:** Fall **College Code:** SHP

NRSG 665 – Nursing Education Outcomes

Credits: 3
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. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 510, NRSG 517, NRSG 580, NRSG 638, NRSG 658, NRSG 660. **Offering:** Spring **College Code:** SHP

NRSG 668 – Roles in Nursing Education

Credits: 2
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. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** NRSG 510, NRSG 517, NRSG 580, NRSG 638, NRSG 658, NRSG 660. **Offering:** Spring **College Code:** SHP

NRSG 670 – Project Continuation

Credits: 0
Student may register for this title while clearing deferred grade (DG) and/or incomplete (I) courses with advisor approval only. Registration for this title indicates full–time status. $ – Course or lab fee **Delivery:** Interactive online course **Grade Mode:** Noncredit (NC,W) **College Code:** SHP

NRSG 675 – Program Continuation

Credits: 0
Students may register for this non–credit continuation course to maintain active status. Please see active status for additional information. Registration does not indicate full–time status. $ – Course or lab fee **Delivery:** Interactive online course **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

NRSG 680 – Teaching Practicum

Credits: 4
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. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** NRSG 510, NRSG 515, NRSG 517, NRSG 548, NRSG 555, NRSG 580, NRSG 638, NRSG 655, NRSG 658, NRSG 660, NRSG 665, NRSG 668. **Offering:** Fall **College Code:** SHP

NRSG 690 – Independent Study

Credits: 1–3
Delivery: Interactive online course **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable **College Code:** SHP

NRSG 698 – Research Utilization Project

Credits: 2
Requires the student to use a recognized research utilization model to develop an evidence–based Nursing Education project. **Delivery:** Interactive online course **Grade Mode:** Satisfactory (S,U,I,W) **Prerequisite/Corequisite:** NRSG 655. **Offering:** Fall **College Code:** SHP

Public Health and Wellness

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www.andrews.edu/shp/nutrition/

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Faculty
Winston Craig, *Chair, Graduate Program Director*
Erica Baker
Magaly Hernandez, *Director of Internship Program in Nutrition and Dietetics (IP)*
Gretchen Krivak, *Director of Didactic Program in Nutrition and Dietetics (DP)*
Jasel McCoy, *Director of Fitness & Exercise Studies*
Emmanuel Rudatsikira
Peter Pribis
Alice Williams

Adjunct Professors of Public Health
Ralph Peterson MD, DrPH
Dr Z. Marcel–Charles
Joycelyn Peterson DrPH, RD, LD
Mark Ghamsary PhD
Fred Hardinge DrPH
Jiri Moskala PhD, ThD

Staff
Christian Lighthall, *Gymnics Coach*
Greggory Morrow, *Aquatics Program Director*

Mission

The mission of the Andrews University Department of Public Health and Wellness is to prepare dietetic, nutrition, wellness and fitness professionals for service in their church, society and the world, and to influence the community–at–large to affirm the Adventist lifestyle, including the vegetarian diet and the benefits of regular exercise and physical fitness.

Bachelors

Exercise Science BS

ACE CPT (Certified Personal Trainer) Certification is required (to pass) before a student can graduate with BS: Exercise Science. A minimum grade of C is required in all majors and cognate courses. A minimum cumulative GPA of 3.0 is required for junior acceptance.

Required Courses – 47

- FDNT 230 – Nutrition Credits: 3
- FTES 325 – Sports Nutrition Credits: 3
- FDNT 448 – Nutrition and Wellness Credits: 3
- FDNT 460 – Seminar Credits: 1–2
- FDNT 498 – Research Methods Credits: 2
- HLED 210 – Philosophy of Health Credits: 3
- HLED 380 – Natural Therapies Credits: 2 or NRSG 466 – Complementary Wellness and Restoration II
- HLED 445 – Consumer Health Credits: 2
- HLED 480 – Wellness Programs Credits: 3
- FTES214
- FTES 305 – Current Concepts and Applications in Physical Fitness Credits: 3
- FTES 355 – Methods of Fitness Instruction Credits: 3
- FTES 410 – Issues in Exercise Studies Credits: 2
- FTES 465 – Exercise Physiology Credits: 4
- two additional FTES activity courses (1 credit each) selected in consultation with your advisor
- FTES 475 – Kinesiology Credits: 3
- FTES 497 – Internship Credits: 2
- PSYC 210 – Introduction to Health Psychology Credits: 3

Required Cognates – 28

- BIOL 221 – Anatomy and Physiology I Credits: 4
- BIOL 222 – Anatomy and Physiology II Credits: 4
- BSAD 355 – Management and Organization Credits: 3
- MKTG 310 – Principles of Marketing Credits: 3
- PSYC 471 – Behavior Modification Credits: 3
- CHEM 110 – Introduction to Inorganic and Organic Chemistry Credits: 4
- BCHM 120 – Introduction to Biological Chemistry Credits: 4
- STAT 285 – Elementary Statistics Credits: 3

Total Credits: 75

Nutrition & Dietetics BS

The Didactic Program in Nutrition and Dietetics (DP) at Andrews University is currently accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics, 120 S Riverside Plaza, Suite 2000, Chicago, IL 60606–6995, 312/899–5400.

Pre–professional program: BHS Wellness

Prospective dietetics students are accepted into the Wellness BHS (Non–Professional program). To transition into the professional program, students need to apply to the director of the Didactic Program in Nutrition and Dietetics (DP) in their sophomore year for acceptance into BS Dietetics. Successful completion of the prerequisite courses listed below with a minimum cumulative GPA of 3.0, and a minimum overall GPA of 2.5 in the science and FDNT courses, is required for entry into BS Dietetics. Upon acceptance into the professional program, the student's major will be changed to BS Dietetics.

Prerequisite Courses – 29

- BCHM 120 – Introduction to Biological Chemistry Credits: 4
- BIOL 221 – Anatomy and Physiology I Credits: 4
- BIOL 222 – Anatomy and Physiology II Credits: 4
- BIOL 260 – General Microbiology Credits: 4
- CHEM 110 – Introduction to Inorganic and Organic Chemistry Credits: 4
- FDNT 230 – Nutrition Credits: 3
- PSYC 101 – Introduction to Psychology Credits: 3
- SOCI 119 – Principles of Sociology Credits: 3

Professional Program: BS Dietetics

Cognate Requirements – 9

- BSAD 355 – Management and Organization Credits: 3
- BSAD 384 – Human Resource Management Credits: 3
- MKTG 310 – Principles of Marketing Credits: 3

DP Requirements – 36

- FDNT 118 – The Profession of Dietetics Credits: 1
- FDNT 124 – Food Science Credits: 3
- FDNT 310 – Nutrition in the Life Cycle Credits: 3
- FDNT 351 – Food Service Management I Credits: 3
- FDNT 352 – Food Service Management II Credits: 3
- FDNT 421 – Community Nutrition I Credits: 2
- FDNT 422 – Community Nutrition II Credits: 2
- FDNT 441 – Medical Nutrition Therapy I Credits: 3
- FDNT 451 – Medical Nutrition Therapy I Lab Credits: 1
- FDNT 442 – Medical Nutrition Therapy II Credits: 3
- FDNT 452 – Medical Nutrition Therapy II Lab Credits: 1
- FDNT 448 – Nutrition and Wellness Credits: 3
- FDNT 460 – Seminar Credits: 1–2

- FDNT 485 – Nutrition and Metabolism Credits: 3
- FDNT 490 – Dietetic Program Review Credits: 1
- FDNT 498 – Research Methods Credits: 2

Total Credits: 74

General Education Requirements – 43

See professional program requirements, see here, and note the following specific requirements:

Religion:

professional degree requirements

Language/Communication:

professional degree requirements

History:

professional degree requirements

Fine Arts/Humanities:

professional degree requirements

Life/Physical Sciences:

- BIOL 221 – Anatomy and Physiology I Credits: 4
- BIOL 222 – Anatomy and Physiology II Credits: 4
- BIOL 260 – General Microbiology Credits: 4
- CHEM 110 – Introduction to Inorganic and Organic Chemistry Credits: 4
- BCHM 120 – Introduction to Biological Chemistry Credits: 4

Mathematics:

professional degree requirements

Computer Literacy:

- INFS 120 – Foundations of Information Technology Credits: 3
  Or
- pass competency exam

Service:

- FDNT 421 – Community Nutrition I Credits: 2
- FDNT 422 – Community Nutrition II Credits: 2

Social Sciences:

- PSYC 101 – Introduction to Psychology Credits: 3
- SOCI 119 – Principles of Sociology Credits: 3

Fitness Education:

professional degree requirements

Preparation for the Registration Exam

Andrews University offers two programs to prepare the student for the registration examination given by the Commission on Dietetic Registration of the Academy of Nutrition and Dietetics (AND).

- 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 Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics (AND), 120 S Riverside Plaza, Suite 2000, Chicago, IL 60606–6995, 312/899–5400.

The Didactic Program in Nutrition and Dietetics (DP)

Admission Requirements

Prospective dietetics students are accepted into the Wellness BHS (Non–Professional program). To transition into the professional program, students need to apply to the director of the Didactic Program in Nutrition and Dietetics (DP) in their sophomore year for acceptance into BS Dietetics by July 15 for the following fall semester. Successful completion of the prerequisite courses listed below with a minimum cumulative GPA of 3.0, and a minimum overall GPA of 2.5 in the science and FDNT courses, is required for entry into BS Dietetics. Upon acceptance into the professional program, the student's major will be changed to BS Dietetics.

Degree Requirements The DP has two phases:

Pre–Professional Program – BHS Wellness: Two years of introductory professional (e.g. Food Science and Nutrition), science prerequisites (such as Intro to Chemistry, Anatomy & Physiology, and Microbiology) and General Education courses which may be obtained at Andrews University or another accredited college or university, or equivalent institution for international students.

Professional Program – BS Nutrition and 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 Nutrition and Dietetics degree. Students who complete the DP requirements will be issued a DP verification statement.

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 recommended to take the following chemistry courses: CHEM 131, CHEM 132; CHEM 231, CHEM 232, CHEM 241, CHEM 242; BCHM 421, BCHM 422,

At least 124 semester hours are recommended for graduation. For BS requirements other than those listed above, refer to the General Education requirements.

Graduation is dependent upon the completion of all curriculum requirements with the maintenance of at least a minimal overall GPA of 2.85 and a minimal GPA of 2.25 in all dietetic and science courses.

Graduates are provided with a Didactic Program in Nutrition and Dietetics Verification Statement, testifying to the fact that they have successfully completed the requirements for a BS degree in Nutrition and Dietetics. Students must successfully pass a comprehensive review exam in their senior year before they are eligible to receive a DP verification form. Dietetics graduates are eligible to apply for an accredited Internship Program in Nutrition and Dietetics.

Students are expected to complete a professional development portfolio during the DP program outlining their goals and accomplishments, including 200 hours of professional dietetic experience (125 hours for students transferring into Andrews University in the junior or senior year). A verification form for completion of the DP program will not be issued until the professional development portfolio has been satisfactorily completed by the student.

After completion of the BS course work for the DP, an eight month Dietetic Internship must be completed by a dietetic student for registration eligibility.

Internship Program

Students need to apply for the Internship Program in Nutrition and Dietetics. A minimum cumulative GPA of 3.0 and DP (Didactic program in Nutrition and Dietetics) GPA of 3.2 is recommended for admission into the program.

This supervised practice provides experiences in three main areas of dietetics—community nutrition, clinical nutrition, and food–service management.

The Internship Program 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 an Internship Program 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 AND. With advanced study or experience, the dietitian may qualify as a specialist in clinical dietetics, food service management, nutrition education, or research.

Total Credits: 74

Nutrition Science BS

The BS: 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.

Required Courses

- BCHM 421 – Biochemistry I Credits: 4
- BIOL 165 – Foundations of Biology Credits: 5 or 4
- BIOL 166 – Foundations of Biology Credits: 5 or 4
- CHEM 131 – General Chemistry I Credits: 4
- CHEM 132 – General Chemistry II Credits: 4
- CHEM 231 – Organic Chemistry I Credits: 3
- CHEM 232 – Organic Chemistry II Credits: 3
- CHEM 241 – Organic Chemistry Laboratory I Credits: 1
- CHEM 242 – Organic Chemistry Laboratory II Credits: 1
- FDNT 230 – Nutrition Credits: 3
- FDNT 310 – Nutrition in the Life Cycle Credits: 3
- FDNT 448 – Nutrition and Wellness Credits: 3
- FDNT 460 – Seminar Credits: 1–2
- FDNT 485 – Nutrition and Metabolism Credits: 3
- FDNT 495 – Independent Study/Readings Credits: 1–3

6 credits chosen from

- FDNT 124 – Food Science Credits: 3
- FDNT 421 – Community Nutrition I Credits: 2
- FDNT 422 – Community Nutrition II Credits: 2
- FDNT 441 – Medical Nutrition Therapy I Credits: 3
- FDNT 469 – International Nutrition Credits: 2–3

And 8 elective credits

selected from chemistry, biology, nutrition, and physics in consultation with the program advisor.

Total Credits: 62

Wellness BHS

Required Courses – 13

- FDNT 230 – Nutrition Credits: 3
- FDNT 448 – Nutrition and Wellness Credits: 3
- FDNT 460 – Seminar Credits: 1–2
- HLED 120 – Fit for Life Credits: 1
- HLED 445 – Consumer Health Credits: 2
- FTES 205 – Fitness Conditioning Credits: 1

Required Cognates – Minimum of 12

Choose one of the following:

- BIOL 260 – General Microbiology Credits: 4
  or
- MLSC 230 – Fundamentals of Clinical Microbiology Credits: 3
  or
- SPPA 280 – Anatomy and Physiology of Speech and Hearing Credits: 4
  or
- PHYS 141 – General Physics I Credits: 4 **AND** PHYS 142 – General Physics II

Choose one of the following:

- BIOL 221 – Anatomy and Physiology I Credits: 4
- BIOL 222 – Anatomy and Physiology II Credits: 4
  or
- BIOL 165 – Foundations of Biology Credits: 5 or 4
- BIOL 166 – Foundations of Biology Credits: 5 or 4
  or
- BIOL 165 – Foundations of Biology credits: 3
- BIOL 221 – Anatomy and Physiology I Credits: 3
  or
- BIOL 100 – Human Biology Credits: 4
  or
- BIOL 221 – Anatomy and Physiology I Credits:4 (SPLAD emphasis only)

Choose one of the following:

- CHEM 110 – Introduction to Inorganic and Organic Chemistry Credits: 4
- BCHM 120 – Introduction to Biological Chemistry Credits: 4
  or
- CHEM 131 – General Chemistry I Credits: 4
- BCHM 120 – Introduction to Biological Chemistry Credits:4
  or
- PHYS 225 – Sound and Waves Credits: 4 (SPLAD emphasis only)

Electives: – 5 to 12 (depending on emphasis selected)

In consultation with advisor. A student needs to maintain a cumulative GPA of 2.50 or greater in all credits used to meet the BHS degree requirements.

General Education Requirements for Nutrition, Fitness and Speech Pathology emphasis

See professional program requirements, see here, and note the following specific requirements:

Religion:

One religion course per academic year of attendance in a Seventh–day Adventist college or university.

Language/Communication:

- ENGL 115 – English Composition I Credits: 3
- ENGL 215 – English Composition II Credits: 3
- COMM 104 – Communication Skills Credits: 3

History:

professional degree requirements

- HIST 117 – Civilizations and Ideas I Credits: 3 or HIST 118 – Civilizations and Ideas II

Mathematics:

A basic statistics or research methods course

- MATH 145 – Reasoning with Functions Credits: 3 or STAT 285 – Elementary Statistics

Social Sciences:

Psychology

An introductory psychology course.

- PSYC 101 – Introduction to Psychology Credits: 3 or PSYC 301 – Human Development—Lifespan or similar PSYC course

Fitness Education:

recommend Andrews freshmen take HLED 120 and one additional course from personal fitness, outdoor skills or team activity. Non–Andrews students take two from the three categories above.

- HLED 120 – Fit for Life Credits: 1

Computer Literacy

- INFS 120 – Foundations of Information Technology Credits: 3

ACE Certification

The Department of Nutrition & Wellness offers the option for certification from the American Council on Exercise (ACE) in the following areas: Certified Personal Trainer, Group Fitness Instructor, Lifestyle & Weight Management Consultant, and Advanced Health & Fitness Specialist. The exams for these certifications will be held on–campus.

Emphasis – Choose one of the following:

Speech Pathology – 29

- SPPA 234 – Introduction to Speech–Language Pathology and Audiology Credits: 3
- SPPA 270 – Preclinical Observation Credits: 1
- SPPA 280 – Anatomy and Physiology of Speech and Hearing Credits: 4
- SPPA 285 – Applied Phonetics Credits: 3
- SPPA 310 – Speech Science Credits: 3
- SPPA 321 – Normal Language Development Credits: 3
- SPPA 322 – Child Language Disorders Credits: 3
- SPPA 331 – Basic Audiology Credits: 3
- SPPA 332 – Audiological Procedures Credits: 3 or SPPA 425 – Clinical Principles and Practices
- SPPA 374 – Articulation and Phonology: Development and Disorders Credits: 3

Fitness – 23

- FTES 210 – Personal Fitness Plan Credits: 1
- FTES 214 – Men's Weight Training and Conditioning Credits: 1 could be replaced by: FTES 214–002 – Women's Strength Training and Toning
- FTES 305 – Current Concepts and Applications in Physical Fitness Credits: 3
- FTES 355 – Methods of Fitness Instruction Credits: 3
- FTES 410 – Issues in Exercise Studies Credits: 2
- FTES 465 – Exercise Physiology Credits: 4
- FTES 495 – Independent Study/Reading/Research/Project Credits: 1–4
- FTES 475 – Kinesiology Credits: 3
- HLED 380 – Natural Therapies Credits: 2 or , NRSG 366 – Complementary Wellness and Restoration I , NRSG 466 – Complementary Wellness and Restoration II
- HLED 480 – Wellness Programs Credits: 3

Nutrition – 30

- FDNT 118 – The Profession of Dietetics Credits: 1
- FDNT 124 – Food Science Credits: 3
- FDNT 310 – Nutrition in the Life Cycle Credits: 3
- FDNT 351 – Food Service Management I Credits: 3
- FDNT 352 – Food Service Management II Credits: 3
- FDNT 421 – Community Nutrition I Credits: 2
- FDNT 422 – Community Nutrition II Credits: 2
- FDNT 476 – Nutrition and Aging Credits: 2
- FDNT 498 – Research Methods Credits: 2
- BSAD 355 – Management and Organization Credits: 3
- BSAD 384 – Human Resource Management Credits: 3
- MKTG 310 – Principles of Marketing Credits: 3

Total Credits for BHS Wellness – Nutrition Emphasis: 60

Total Credits for Fitness Emphasis: 60

Total Credits for Speech Pathology and Audiology Emphasis: 60

Undergraduate Minors

Fitness Education Minor

This minor is not approved for Michigan elementary or secondary teaching certification.

If student seeks to take an ACE National Fitness Certification Exam, it is recommended they also take FTES 465 prior to the exam.

Fitness and Exercise Courses

Each class includes both the fitness component as well as skills instruction. The goals of the fitness & exercise 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 life.
3. To provide a variety of physical activities designed to meet the needs and desires of a diverse student population.

Required Courses

- BIOL 221 – Anatomy and Physiology I Credits: 4
- BIOL 222 – Anatomy and Physiology II Credits: 4
- FTES 205 – Fitness Conditioning Credits: 1
- FTES 214 – Men's Weight Training and Conditioning Credits: 1
- FTES 214–002 – Women's Strength Training and Toning Credits: 1
- FTES 305 – Current Concepts and Applications in Physical Fitness Credits: 3
- FTES 355 – Methods of Fitness Instruction Credits: 3
- FDNT 230 – Nutrition Credits: 3

ACE Certification

Students taking the Minor in Fitness Education have the option of sitting for the Personal Trainer or Group Fitness Instructor Certification that is offered through the American Council on Exercise (ACE). The tests will be offered on–campus.

Total Credits: 20

Health Minor

Required Courses

- FDNT 230 – Nutrition Credits: 3
- FDNT 240 – Nutrition Laboratory Credits: 1
- HLED 120 – Fit for Life Credits: 1
- HLED 210 – Philosophy of Health Credits: 3
- HLED 445 – Consumer Health Credits: 2
- FTES 214 – Men's Weight Training and Conditioning Credits: 1 **OR** FTES 214–002 – Women's Strength Training and Toning Credits: 1
- Plus 9 credits selected from HLED, FDNT, FTES **OR** other health–related courses approved by the program director.

Total Credits: 20

Nutrition and Wellness Minor

Required courses

Must include

- FDNT 124 – Food Science Credits: 3
- FDNT 230 – Nutrition Credits: 3
- FDNT 310 – Nutrition in the Life Cycle Credits: 3
- FDNT 448 – Nutrition and Wellness Credits: 3
- FDNT 460 – Seminar Credits: 1–2
- HLED 120 – Fit for Life Credits: 1
- plus 6 credits selected from the Department of Nutrition and Wellness approved by the director of the Dietetics program.

Total Credits: 20

Nutrition and Wellness MPH

Delivery: This program is offered in an interactive online format (see School of Distance Education Definitions). The interactive online degree does not require any on–campus time.

Degree Requirements

In addition to the Graduate Academic Requirements for graduate degrees the following departmental requirements should be noted:

- A minimum of 42 semester credits
- Public Health Core – 18 Credits
- Research – 4 Credits
- Concentration – 12 Credits
- Practicum – 8 Credits
- Research – 4 Credits
- Culminating Activity

Public Health Core 18 Credits

- PBHL 511 – Biostatistics Credits: 3
- PBHL 521 – Principles of Epidemiology Credits: 3
- PBHL 525 – Principles of Environmental Health Credits: 3
- PBHL 531 – Principles of Health Behavior Credits: 3
- PBHL 535 – Principles of Health Administration Credits: 3
- PBHL 575 – Integrated Public Health Capstone Credits: 3

Research 4 Credits

- FDNT 560 – Health Research Methods Credits: 2
- FDNT 680 – Research Seminar Credits: 1 + 1
- Student must register for FDNT 680 for two semesters, with a minimum of one credit each semester.

Concentration 12 Credits

- FDNT 545 – Nutrition and Wellness Programs Credits: 3
- FDNT 565 – Current Issues in Nutrition and Wellness Credits: 3
- FDNT 520 – Vegetarian Nutrition and Disease Prevention Credits: 3
- FTES 510 – Fitness and Health Promotion Credits: 3

Practicum 8 Credits

Select one track to fulfill practicum requirement.
Track 1

- PBHL 580 – Field Practicum Credits: 4
- FDNT 698 – Research Project Credits:4

Track 2

- FDNT 594 – Dietetic Internship Credits: 4 + 4
  Student must take this course for two semesters

Culminating Activity

Student is required to demonstrate ability to integrate specific areas of public health: Administration, Epidemiology, Statistics, Environmental Health, Health Behavior and Nutrition during culminating activity experiences.

Culminating activity includes: A written comprehensive exam, field experience/research project/diatetic internship after completion of all courses, professional portfolio, and an exit interview with the department chairman at conclusion of program.

Admission Requirements

To be eligible for admission to the MPH program, you must have completed a bachelor's degree or equivalent with a grade point average (GPA) of 3.0 or better (on a 4.0 scale). A limited number of students whose background and experience show potential for success but whose GPAs are less than 3.0 will be admitted on a provisional basis.

Prerequisites

- College–level writing course
- Physiology course
- Two nutrition courses
- Chemistry course

Total Credits: 42

Nutrition

FDNT 118 – The Profession of Dietetics

Credits: 1
A discussion of the dietetics profession and the role of the dietitian within the health–care team. Ethical concerns in the practice of dietetics. **Grade Mode:** Normal (A–F,I,W) **Offering:** Spring **College Code:** SHP

FDNT 124 – Food Science

Credits: 3
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 $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

FDNT 230 – Nutrition

Credits: 3
A study of the basic principles of nutrition science, the biochemical functions of various nutrients, the changes in physiological needs with age, and the relationship between nutrition and health. Students needing life science general education credit must also register for the lab, FDNT240. Weekly: 3 lectures $ – Course or lab fee **Delivery:** Interactive online option available **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall, Spring **College Code:** SHP

FDNT 230V – Nutrition

Credits: 3
A study of the basic principles of nutrition science, the biochemical functions of various nutrients, the changes in physiological needs with age, and the relationship between nutrition and health. Students needing life science general education credit must also register for the lab, FDNT240. **Delivery:** Self–paced online course **Grade Mode:** Griggs corresp (A–F,I,W,DG,DN) **College Code:** SHP

FDNT 240 – Nutrition Laboratory

Credits: 1
Discovering principles of nutrition science in the laboratory. Weekly: 3–hour lab. Lab required for those students needing life science general education credit. $ – Course or lab fee **Delivery:** Self–paced online option available **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall, Spring **College Code:** SHP

FDNT 310 – Nutrition in the Life Cycle

Credits: 3
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. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 230. **Offering:** Fall **College Code:** SHP

FDNT 351 – Food Service Management I

Credits: 3
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: 2–hour lecture and 3 to 4 hour practicum $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** FDNT 124, BIOL 260 **Prerequisite(s):** MATH 145 or equivalent, and a passing grade of 85% on a departmental math skills test. **Offering:** Fall, alternate years **College Code:** SHP

FDNT 352 – Food Service Management II

Credits: 3
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–hour lecture and up to 4–hour lab $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 351; BSAD 355. **Offering:** Spring, alternate years **College Code:** SHP

FDNT 415 – Professional Experience

Credits: 1–4
A supervised lab experience introducing the student to the role of a professional in the workplace. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable up to 8 credits **Offering:** Fall, Spring **College Code:** SHP

FDNT 421 – Community Nutrition I

Credits: 2
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 lab $ – Course or lab fee Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Course Attribute:** Service course **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 310. Fall—Offered alternate years **College Code:** SHP

FDNT 422 – Community Nutrition II

Credits: 2
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 lab $ – Course or lab fee Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 421. **Offering:** Spring, alternate years **College Code:** SHP

FDNT 440 – Topics in

Credits: 1–3
Selected topics in nutrition. **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable with different topics **College Code:** SHP

FDNT 441 – Medical Nutrition Therapy I

Credits: 3
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. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** Prerequisites: FDNT 310, FDNT 485. **Offering:** Fall **College Code:** SHP

FDNT 442 – Medical Nutrition Therapy II

Credits: 3
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. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 441. **Offering:** Spring **College Code:** SHP

FDNT 448 – Nutrition and Wellness

Credits: 3
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. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 230. **Offering:** Fall **College Code:** SHP

FDNT 451 – Medical Nutrition Therapy I Lab

Credits: 1
Review of care plans and case studies $ – Course or lab fee Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** FDNT 441 **Offering:** Fall **College Code:** SHP

FDNT 452 – Medical Nutrition Therapy II Lab

Credits: 1
Analysis of care plans and care studies $ – Course or lab fee Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** FDNT 442 **Offering:** Spring **College Code:** SHP

FDNT 460 – Seminar

Credits: 1–2
Review of contemporary issues and/or current literature in nutrition. **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable up to 3 credits **Offering:** Spring **College Code:** SHP

FDNT 469 – International Nutrition

Credits: 2–3
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. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

FDNT 476 – Nutrition and Aging

Credits: 2
Physiological changes in aging. Food–selection patterns, nutritional needs, nutritional disorders, and chronic diseases. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 230. **Repeatable:** Repeatable **Offering:** Fall **College Code:** SHP

FDNT 478 – Study Tour:

Credits: 0
Travel to destinations relevant to individual programs of study. Classes will be selected from department(s) offerings. Fee may be required. $ – Course or lab fee Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable up to 4 credits **College Code:** SHP

FDNT 485 – Nutrition and Metabolism

Credits: 3
Study of the nutrients and their functions within the living cell and the complex organism. Discussion of the major metabolic pathways. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** BCHM 120, FDNT 230. **Offering:** Spring **College Code:** SHP

FDNT 490 – Dietetic Program Review

Credits: 1
A comprehensive review of the major elements of the undergraduate dietetics program (DPD). The senior comprehensive exam will be given at the end of the semester. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

FDNT 495 – Independent Study/Readings

Credits: 1–3
Grade Mode: Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable up to 4 credits in independent study and 4 credits in readings on nutrition and dietetics **Special Approval:** Instructor permission required. **College Code:** SHP

FDNT 497 – Internship

Credits: 2
Supervised field experience in an approved health institution or health promotion program for a total of 200 hours. Application of knowledge and competencies learned in the health program. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

FDNT 498 – Research Methods

Credits: 2
A study of research methodology, survey methods, and applied statistics as they relate to dietetics. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

FDNT 520 – Vegetarian Nutrition and Disease Prevention

Credits: 3
The role of plant–based diets and exercise in health promotion and prevention of major chronic diseases of affluent societies. The impact of complementary nutrition on personal health. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

FDNT 540 – Maternal and Child Nutrition

Credits: 2
Role of nutrition in human growth and development, with emphasis on prenatal period, infancy, childhood, and adolescence. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FDNT 545 – Nutrition and Wellness Programs

Credits: 2–4
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. $ – Course or lab fee **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 448. **Repeatable:** Repeatable up to 4 credits **College Code:** SHP

FDNT 555 – Advanced Human Nutrition I

Credits: 3
Functions and nutritional metabolism of simple and complex carbohydrates, lipids, amino acids, and proteins. Public health applications. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** A course in biochemistry. **Offering:** Fall **College Code:** SHP

FDNT 556 – Advanced Human Nutrition II

Credits: 3
Functions and nutritional metabolism and interactions of fat–soluble and water–soluble vitamins, minerals, and trace minerals. Public health applications. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** A course in biochemistry. **Repeatable:** Repeatable **Offering:** Spring **College Code:** SHP

FDNT 560 – Health Research Methods

Credits: 2
The study of research methodology, statistical analysis, and the evaluation of research papers. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

FDNT 565 – Current Issues in Nutrition and Wellness

Credits: 3
Discussion of current issues in nutrition, food safety, public health, and wellness. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 230. **Offering:** Spring **College Code:** SHP

FDNT 570 – Maternal and Child Health

Credits: 3
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. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FDNT 585 – Topics in _____

Credits: 1–4
Selected topics in the areas of nutrition and wellness. **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable up to 6 credits **College Code:** SHP

FDNT 586 – Professional Experience

Credits: 1–4
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. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable up to 8 credits **College Code:** SHP

FDNT 594 – Dietetic Internship

Credits: 0,4
The internship is equivalent to a full–time load. It involves 3540 hours per week of supervised practice. Open only to students seeking registration eligibility with the Commission on Dietetic Registration of the Academy of Nutrition and Dietetics. $ – Course or lab fee **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable up to 8 credits **Offering:** Fall, Spring **College Code:** SHP

FDNT 600 – Research Design

Credits: 1
Criteria for the organization, analysis, and reporting of research in nutrition. Preparation of a proposal for a master's thesis or project. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 498 or equivalent. **Repeatable:** Repeatable **Offering:** Spring **College Code:** SHP

FDNT 648 – Workshop

Credits: 1–4
Grade Mode: Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable **College Code:** SHP

FDNT 650 – Project Continuation

Credits: 0
Student may register for this title while clearing deferred grade (DG) and/or incomplete (I) courses with advisor approval only. Registration for this title indicates full–time status. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

FDNT 655 – Program Continuation

Credits: 0
Students may register for this non–credit continuation course to maintain active status. For additional information on active status, please see Admission Status Categories in the School of Graduate Studies and Researc Section of the bulletin. Registration does not indicate full–time status. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

FDNT 660 – Thesis Continuation

Credits: 0
Student may register for this title while clearing deferred grade (DG) and/or incomplete (I) courses with advisor approval only. Registration for this title indicates full–time status. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

FDNT 665 – Preparation for Comprehensive Exams

Credits: 0
Advisor approval required. Registration for this title indicates full–time status. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

FDNT 670 – Comprehensive Exam

Credits: 0
Grade Mode: Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable **College Code:** SHP

FDNT 680 – Research Seminar

Credits: 1–4
Individual reports and discussion of recent research data. **Delivery:** Interactive online course **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Prerequisite(s):** Consent of instructor required. **Repeatable:** Repeatable up to 4 credits **College Code:** SHP

FDNT 690 – Independent Study

Credits: 1–6
Individual study and/or research. Consent of instructor required. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable up to 6 credits **College Code:** SHP

FDNT 698 – Research Project

Credits: 3
Provides students with guidelines and supervision for data collection, analysis, project preparation and oral presentation. **Delivery:** Interactive online course **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable **College Code:** SHP

FDNT 699 – Master's Thesis

Credits: 3–6
Grade Mode: Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable up to 6 credits **College Code:** SHP

Fitness & Exercise Studies

FTES 106 – Beginning Basketball

Credits: 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. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 107 – Beginning Volleyball

Credits: 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. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 109 – Beginning Softball

Credits: 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. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 114 – Soccer

Credits: 1
Learning the fundamental skills of ball control, passing, blocking and shooting goals. Indoor or outdoor games depending upon the season and weather. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 115 – Disc Sports

Credits: 1
Development of basic skills for "Disc Sports" like disc golf and ultimate frisbee. Students will learn the basic strokes, rules and techniques to allow them to be proficient in these lifetime activities. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 116 – Weight Control

Credits: 1
Study of the factors involved in weight loss and health improvement using a combination of concepts and applications in physical fitness, healthy nutrition and self–control. Cardiovascular, strength and flexibility exercises will be introduced and practiced throughout this course. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 118 – Badminton

Credits: 1
Analysis and practice of basic strokes, singles and doubles play, strategy and rule interpretations. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 119 – Tennis

Credits: 1
Instruction in the fundamental skills of ground strokes, serving, volleying, team play, basic strategy and rules. Students must supply their own racquet and balls. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Offering:** Spring **College Code:** SHP

FTES 120 – Scuba

Credits: 1
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. Students will earn scuba license upon completion. Additional fees apply. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Offering:** Spring **College Code:** SHP

FTES 124 – Backpacking

Credits: 1
Students will gain knowledge of outdoor elements like one match and friction fires, orienteering, lightweight backpacking, and many other necessary skills. The class also uses and applies the current leave no trace principles and how they affect everyday life. The class culminates with a four–day backpacking trip that occurs over a long weekend where the skills and adventure of living outdoors are put into practice. The student will be responsible for providing their own backpack. The department will supply all necessary additional gear. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 125 – Canoeing

Credits: 1
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. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

FTES 126 – Cycling

Credits: 1
A study of the various types of cycling, cycling techniques and the proper maintenance of a bicycle. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 127 – Rock Climbing

Credits: 1
A safe introductory course that includes learning climbing skills, essential climbing knots, proper equipment and safety, and self–rescue. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 128 – Golf

Credits: 1
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. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Offering:** Spring **College Code:** SHP

FTES 129 – Beginning Racquetball

Credits: 1
Introduction to basic strokes, singles and doubles play, strategy and rule interpretations. Students must supply their own racquet, balls and eye–guards. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 130 – Special Activities

Credits: 1
Special areas beyond normally offered courses: Cardinal Athletics, personalized fitness activities, horseback riding. Consult the current class schedule for activities offered each year. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable with different topics **College Code:** SHP

FTES 131 – Pilates

Credits: 1
The student will learn the Pilates fundamentals and essential mat work exercises, then work towards mastery of these basic skills. Pilates exercises help to strengthen core muscles and increase flexibility, endurance, posture and body awareness. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 132 – Cardio Kick

Credits: 1
The student will participate in a high–intensity, cardio workout utilizing kickboxing techniques and aerobic movements. In addition, the student will learn abdominal exercises and whole body strengthening exercises. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 135 – Self–Defense

Credits: 1
The purpose of this class is to provide the student with the appropriate level of knowledge and skills in self–defense. As a result of the class the student will improve his/her general physical fitness and skill performance. Principles, techniques and safe practices of self–defense will be taught. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 140 – Aqua Aerobics

Credits: 1
This course is designed to use water resistance and rhythmic movements for both low and non–weight bearing improvements in cardiovascular fitness, muscle strength and endurance as well as flexibility. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 144 – Floor Hockey

Credits: 1
Introduction to the game, including team composition, rules and fundamental skills. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 150 – Swimming

Credits: 1
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. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 174 – Cross–Country Skiing

Credits: 1
Instruction in cross–country skiing technique, conditioning, equipment and winter safety. $ – Course or lab fee **Grade Mode:** Satisfactory (S,U,I,W) **College Code:** SHP

FTES 205 – Fitness Conditioning

Credits: 1
This class is designed to inspire a lifelong fitness program using dynamic movements and natural body resistance. Will explore ways to gain maximum results using the minimal equipment, such as the new suspension system 'TRX.' All workouts will target the anaerobic zone while strength training. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 206 – Intermediate Basketball

Credits: 1
Analysis of and drills in fundamental skills, offensive and defensive strategies. Emphasis is given to team play. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 207 – Intermediate Volleyball

Credits: 1
Instruction in advanced team play, offensive and defensive strategies. Game scrimmages will help to perfect fundamental skills. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 210 – Personal Fitness Plan

Credits: 1
A study of basic–fitness concepts and principles in conjunction with a personalized exercise program for physical fitness. Weekly independent workouts are required. $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

FTES 214 – Men's Weight Training and Conditioning

Credits: 1
A study of the basic principles in strength training and conditioning for men and women as well as the application of different methods of muscular strength and endurance training. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 214–002 – Women's Strength Training and Toning

Credits: 1
A study of the basic principles in strength training and conditioning for men and women as well as the application of different methods of muscular strength and endurance training.
$ – Course or lab fee
College Code: SHP

FTES 240 – Gymnics

Credits: 0 or 1
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. All students on the team must register each semester. Course can be taken for credit one semester per academic year. $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Repeatable:** Repeatable **College Code:** SHP

FTES 266 – Officiating

Credits: 1
Practical field experience in officiating. Rules, officiating mechanics and signals, learned and practiced. MHSAA certification available. Certified officials have opportunities to earn up to $50.00 a game for officiating elementary school, middle school and high school athletic contests. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** Previous knowledge of the game and/or experience playing the game. **College Code:** SHP

FTES 275 – Outdoor Trips–N–Treks:

Credits: 1
One– to two–week trips beyond the normally offered activity courses: Biking, Backpacking, Skiing. Consult the current class schedule for activities offered each year. Normally involves out–of–state destinations when school is not in regular session. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable with different topics **Special Approval:** Instructor permission required. **College Code:** SHP

FTES 278 – Study Tour:

Credits: 0
Travel to destinations relevant to individual programs of study. Classes will be selected from department(s) offerings. Fee may be required. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

FTES 300 – Lifeguarding

Credits: 1
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. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** Ability to swim 500 yards in 10 minutes or less. **College Code:** SHP

FTES 305 – Current Concepts and Applications in Physical Fitness

Credits: 3
A foundational course surveying the current trends and practices in the area of physical fitness. Understanding and critically analyzing the concepts, principles, and guidelines for fitness exercise and related activities. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Offering:** Fall **College Code:** SHP

FTES 325 – Sports Nutrition

Credits: 3
A study of the association between nutrition and exercise performance. Metabolism of carbohydrates, fats, proteins, vitamins, minerals and water and their effect on training. Nutrition assessment of athletes and how to measure body composition. Sport specific nutrition recommendations and the use of ergogenic aids. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FDNT 230 **College Code:** SHP

FTES 330 – Outdoor Adventure

Credits: 1
Instruction in camping and outdoor techniques, open fire cooking, orienteering, backpacking, wilderness first aid and edible wild plants. Department supplies all necessary equipment except backpack. One weekend trip required where students will day hike and live outdoors. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 350 – Water Safety Instructor

Credits: 0 or 1
Instruction in techniques for teaching American Red Cross swimming courses. Current CPR certification required. Swimming pretest required. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

FTES 355 – Methods of Fitness Instruction

Credits: 3
A course providing knowledge and practical application for instructing safe and effective exercise programming for apparently healthy individuals. Teaching and evaluating of a variety of individual and group exercise sessions including several different types of physical activities. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** FTES 305. **Offering:** Spring **College Code:** SHP

FTES 389 – WSI Internship

Credits: 1
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 expected to provide lesson plans and teach all the required lessons. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

FTES 410 – Issues in Exercise Studies

Credits: 2
Addresses a variety of current issues within exercise science in the 21st century related to special populations, weight management, nutrition, appropriate methods and safety. **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable **College Code:** SHP

FTES 465 – Exercise Physiology

Credits: 4
Study of the body's physiological response to exercise. Weekly: 3 lectures and a 3–hour lab $ – Course or lab fee Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** BIOL 221, BIOL 222 or equivalent. Must be a junior or senior to register for this course. **Offering:** Spring **College Code:** SHP

FTES 475 – Kinesiology

Credits: 3
An understanding of how the structure of the humans body determines its function, how movement is produced, and how exercise can maintain, rehabilitate, and improve body structure. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** BIOL 221, BIOL 222 **College Code:** SHP

FTES 495 – Independent Study/Reading/Research/Project

Credits: 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. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable up to 4 credits **Offering:** Fall, Spring **College Code:** SHP

FTES 497 – Internship

Credits: 2
Supervised field experience in an approved health, fitness or wellness facility engaged in a health promotion program for a total of 90 hours. Application of knowledge and competencies learned in the fitness and wellness program. **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable up to 4 credits **Offering:** Fall, Spring, Summer **College Code:** SHP

FTES 510 – Fitness and Health Promotion

Credits: 3
The role that fitness plays in promoting personal and community health. The challenges involved in achieving personal fitness and weight management. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

Health Education

HLED 120 – Fit for Life

Credits: 1
A balanced up–to–date coverage of all critical areas of wellness including physical fitness, nutrition, weight management and stress, as well as the principles of health according to the Bible and Ellen G. White will be studied. Practical tools will be given to help adopt and model healthier lifestyles. $ – Course or lab fee **Delivery:** Interactive online option available; self–paced online option available **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

HLED 210 – Philosophy of Health

Credits: 3
The Biblical basis of health. A study of the historical development and basis of the health message in the Seventh–day Adventist Church. The role of health promotion in current society. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

HLED 380 – Natural Therapies

Credits: 2
The study of simple natural therapeutic remedies, including massage, hydrotherapy and herbal therapies. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

HLED 425 – Health & Fitness Evangelism

Credits: 3
Explores the principles and concepts of biblical evangelism and applies those teachings within the context of health and fitness in modern society. A deeper exploration of the practical applications of physical activity from the outset of the Seventh–day Adventist Church and how it applies to the current times. A strategic approach in developing modern methods for health and fitness evangelism to strengthen the "right arm" of the church's effort in ministry. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

HLED 445 – Consumer Health

Credits: 2
An analysis of the various fads in society today, and the methods and techniques used by promoters of healthcare products and services. A study of ways in which consumers are vulnerable to certain health claims and scams, and the protection provided to the consumer by governmental agencies. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

HLED 480 – Wellness Programs

Credits: 3
Learning the steps of needs assessment of a community, planning a program, conducting a health promotion program while utilizing the resources of the community, and the program evaluation. Two lectures per week and a third hour each week. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

Public Health

PBHL 511 – Biostatistics

Credits: 3
Introduces statistical concepts and analytical methods as applied to data encountered in biomedical sciences. It emphasizes the basic concepts of experimental design, quantitative analysis of data, and statistical inferences. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PBHL 521 – Principles of Epidemiology

Credits: 3
Introduces the basic principles and applications of epidemiology. Epidemiology is one of the pillars of public health. Describes the distribution and determinants of disease in human populations. Introduces students to the theory, methods, and body of knowledge of epidemiology. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PBHL 525 – Principles of Environmental Health

Credits: 3
Presents concepts, principles, and applications that form the basis of environmental health. Describes the sources, pathways of exposure, and methods of control of the principal physical, chemical, biologic, and sociologic factors that impact human health in ambient, indoor and occupational environments. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PBHL 531 – Principles of Health Behavior

Credits: 3
Examines the psycho–social, behavioral, and educational principles that determine health behavior. Describes the philosophical, ethical and theoretical foundations of health education in schools, community, work site and hospital settings. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PBHL 535 – Principles of Health Administration

Credits: 3
Describes the application of administrative theory to health delivery, policy, and planning. Examines structures and functions of management and their application in public health. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PBHL 575 – Integrated Public Health Capstone

Credits: 3
The Integrated Public Health Capstone project is a requirement for graduation for students in the MPH program. It is an opportunity for students to work on public health practice projects that is of interest to them. The goal is for students to synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience. Completion of the capstone project requires both written and oral components. The capstone is typically completed in the last two terms of the program. The project is done under the direction of a capstone advisor. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PBHL 580 – Field Practicum

Credits: 4
A minimum of 400 hours required **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

Physical Therapy

8515 E Campus Circle Dr
Berrien Springs MI 49104–0420
269–471–AUPT or 800–827–AUPT
FAX: 269–471–2866
www.andrews.edu/phth/
Admissions Fax: 269–471–2867
Admissions E–mail: pt–info@andrews.edu

Faculty
Wayne L. Perry, *Chair, DPT Program Director*
Kimberly Coleman–Ferreira, *Clinical Education Director, DPT Assistant Program Director*
Greg Almeter, *Orthopedic Musculoskeletal Coordinator*
Kathy A. Berglund, *Postprofessional Program Director*
Staff, *Behavioral Science Coordinator*
Lori Walton, *Research Coordinator*
Elizabeth Oakley, *Clinical Science Coordinator*
Lee E. Olson, *Neuromuscular Coordinator*
Leslie Samuel, *Foundation Science Coordinator*
David P. Village, *General Medicine Coordinator*

Emeritus
William C. Habenicht, MPH – Professor of Physical Therapy, Emeritus
Wayne L. Perry, PT, MBA, PhD – Professor of Physical Therapy, Emeritus
John Carlos, Jr., PT, PhD – Professor of Physical Therapy, Emeritus

Mission

In accordance with the Seventh–day Adventist Church and Andrews University, the mission of the Department of Physical Therapy is to provide a quality physical therapist education within a cooperative learning environment that promotes Christian values. The physical therapy department provides resources and encourages faculty to continue their educational, professional, and spiritual growth. The physical therapy faculty delivers, within a Christ–centered environment, the knowledge base and clinical skills that will prepare students for contemporary physical therapy practice. Physical therapy graduates will serve Christ as evidenced by their ministering to the needs of others through the delivery of effective professional healthcare. The physical therapy department faculty and graduates comprise a Christian network that is balanced in the development of the spiritual, mental, physical, and social life of its members.

Physical therapy is a health profession dedicated to evaluating, treating, and preventing physical injury and disease. Physical therapists 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.

Physical therapists work closely with their client's family, physician, and other members of the medical team to help their client return to their home environment and resume activities and relationships of normal daily living.

Academic Calendar. Contact the Department of Physical Therapy for academic dates.

Bachelors

Health Science, (Interim Degree) BHS

Students successfully completing the appropriate prerequisites and the first two semesters (36 credits) of the professional program qualify for the Bachelor of Health Science Degree. Successful completion of the BHS is defined as:

1. An earned minimum grade of “C+” (2.33) or “S” (in a “S/U” course) in each DPT program course. The BHS program courses include PTH 400, PTH 410, PTH 415, PTH 416, PTH 418, PTH 420, PTH 425, PTH 426, PTH 428, PTH 430, PTH 440, PTH 445, PTH 450, PTH 455, PTH 457, and PTH 460.
2. No more than a cumulative total of five points earned on the grade–point scale throughout the physical therapy program (see DPT Student Handbook).
3. Students must be able to perform skills listed in the Technical Standards of Performance and demonstrate professional behaviors as outlined in the DPT Student Handbook.
4. Maintain a cumulative GPA of 2.50 or greater in all credits used to meet the BHS degree requirements.

Post–Masters

Physical Therapy DPT

This three–year program begins after a student completes 92 semester credits of specific college prerequisites. Students taking the appropriate prerequisites will earn a Bachelor of Health Science (BHS) after the first year in the professional program and the DPT degree upon successful completion of the program. A previous bachelor's degree is not required however applicants holding a bachelor's degree are eligible to apply as well.

Program Accreditation

The DPT program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE)*. After receiving the DPT degree graduates may apply to take the physical therapy licensure exam in the state of their choice. * 1111 North Fairfax, Alexandria, VA 22314

Information/Application Process

Please call 1–800–827–2878, e–mail pt–info@andrews.edu or visit www.andrews.edu/cas/pt for application instructions and admission requirements. Information is available by June of each year.

All applicants applying for admission to the DPT professional entry program must apply via the Physical Therapy Centralized Application Service. For priority processing, please submit your application by December 31. Successful completion of prerequisite courses does not guarantee acceptance into the DPT program.

Admission Requirements

There are three tracks for admission into the DPT program. The minimum requirements to be considered for admission are:

- **Freshman Acceptance** (Requires PTCAS application, but no interview or confirmation deposit). Freshman enrolling as a BHS: Physical Therapy major are guaranteed acceptance into the DPT program if they complete at least 90% of prerequisite course requirements at Andrews, maintain at least a 3.4 science and overall prerequisite GPA, meet all program admission requirements, uphold University standards and display professional behavior.

- **Preferred Acceptance** (Requires a PTCAS application, interview and confirmation deposit). Acceptance into the program is preferred when a student transfers into Andrews University for at least their last semester of prerequisite requirements, has at least a 3.3 science and overall prerequisite GPA, meets all program admission requirements, and upholds University standards and display professional behavior.

- **General Acceptance** (Requires a PTCAS application, interview and confirmation deposit). The Andrews University physical therapy program enrolls students from a nationwide pool of applicants. General Acceptance includes any student who has completed all prerequisite requirements from any U.S. accredited college or university (or U.S. equivalent), maintains at least a 3.0 science and overall prerequisite GPA, meets all program admission requirements, and upholds University standards and displays professional behavior.

Additional requirements for students with and without an earned bachelor's degree:

GPA: A minimum GPA of 3.00 is required in science courses and a minimum GPA of 3.00 in all core PT prerequisite courses. A grade of "C" or better is required in each prerequisite course.

Graduate Record Exam (GRE): A minimum composite score of 270 (Verbal + Quantitative), and a minimum Written score of 3.0. Scores should reflect test date within five years of enrollment in the program.

Clinical Observation: Students must complete a minimum of 80 observation hours supervised by a licensed physical therapist in at least 2 different settings; at least 20 hours must be in an inpatient acute care or hospital setting. Please note that a skilled nursing home facility **does not** qualify as a hospital or acute care setting. See PTCAS for a copy of an Observation Hours Verification form.

Personal Interview: Applicants who meet eligibility requirements are invited for a personal interview. Phone interviews may be acceptable, though not preferred.

English Proficiency: Applicants who have been given any part of their education outside the U.S. or Canada or whose first language is not English must demonstrate English proficiency by providing evidence through one of the following methods. Exceptions may be granted by the Department of Physical Therapy on an individual

basis. Test must be taken within one year prior to application. TOEFL internet–based test (iBT) is preferred. Official TOEFL scores must be sent directly to PTCAS from Educational Testing Service (ETS). The PTCAS ETS code is 531.

Minimum Requirements	
TOEFL Internet–based test (iBT)	111 (minimum of 15 in Reading, 15 in Listening, 18 in Speaking and 17 in Writing)
TOEFL Paper–based test	640 (minimum of 56 in each section)
IELTS Academic Version	8.0
MELAB	92 (minimum of 80 in each section)
PTE Academic Version	72

For students applying to the DPT program beginning Fall 2016 (students applying prior to Fall 2016 should consult PT Admissions):

Prerequisite courses including general education requirements for students WITHOUT an earned bachelor's degree

Requires a minimum of 92 semester credits, with at least 15 credits being upper–division. Applicants are considered when a minimum of 4 or more prerequisite science courses and a minimum of 60 semester credits have been completed.

General Education Requirements

See professional program requirements and note the following **specific** requirements:

Religion:

one religion course per academic year of attendance at Andrews University.

Language/Communication:

professional degree requirements

History:

professional degree requirements

Fine Arts/Humanities:

professional degree requirements

Life/Physical Sciences:

Life Science:

- A full sequence of Anatomy and Physiology with labs, **and**
- One course of the General Biology sequence required for pre–med students (not botany) with lab, **and**
- One 3–semester credit *upper division* human biology or exercise physiology course.

Physical Science:

- A full sequence of General Physics with labs, as required for pre–med students
- A full sequence of General Chemistry with labs, as required for pre–med students

Mathematics:

A basic statistics or research methods course

Service:

fulfilled through professional components of the program

Social Sciences:

Psychology

An introductory psychology course.

Fitness Education:

recommend Andrews freshmen take HLED 120 and one additional course from personal fitness, outdoor skills or team activity. Non–Andrews students take two from the three categories above.

Human Development:

A course which covers human development throughout the lifespan.

Medical Terminology:

A course in basic medical terminology. May be taken by distance learning.

Electives:

To fulfill the 92 total semester credits with at least 15 in upper division courses required, some course suggestions include business courses, ethics, cultural and diversity courses, arts and humanities, nutrition and physical activities.

Prerequisite courses for students WITH an earned bachelor's degree:

Life/Physical Sciences

Life Science:

- A full sequence of Anatomy and Physiology with labs, **and**
- One course of the General Biology sequence required for pre–med students (not botany) with lab, **and**
- One 3–semester credit *upper division* human biology or exercise physiology course

Physical Science:

- A full sequence of General Physics with labs, as required for pre–med students
- A full sequence of General Chemistry with labs, as required for pre–med students

Mathematics:

A basic statistics or research methods course.

Social Sciences

Psychology

An introductory psychology course.

Human Development

A course which covers human development throughout the lifespan.

Medical Terminology:

A course in basic medical terminology. May be taken by distance learning.

Additional requirements for students with and without an earned bachelor's degree:

GPA: A minimum GPA of 3.00 is required in science courses and a minimum GPA of 3.00 in all core PT prerequisite courses. A grade of "C" or better is required in each prerequisite course.

Graduate Record Exam (GRE): A minimum composite score of 270 (Verbal + Quantitative), and a minimum written score of 3.0. Submit scores from the General Test taken less than five years prior to enrollment in the program.

Clinical Observation: Document 80 hours (including 20 hours in an inpatient setting) supervised by a licensed physical therapist. All hours must be completed within three years prior to enrollment.

Personal Interview: Applicants who meet eligibility requirements are invited for a personal interview. Phone interviews may be acceptable.

English Proficiency: Applicants who have been given any part of their education outside the U.S. or Canada or whose first language is not English must demonstrate English proficiency by providing evidence through one of the following methods. Exceptions may be granted by the Department of Physical Therapy on an individual basis. Test must be taken within one year prior to application. TOEFL internet–based test (iBT) is preferred. Official TOEFL scores must be sent directly to PTCAS from Educational Testing Service (ETS). The PTCAS ETS code is 531.

TOEFL (iBT) Internet–based test	90 (minimum of 15 in reading, 15 in listening, 18 in speaking, and 17 in writing)
TOEFL paper–based test	600 (minimum of 56 in each section)
IELTS	8.0
MELAB	93 (minimum of 80 in each section)
TOEIC	800

BHS: Bachelor of Health Science (Interim Degree)

Students successfully completing the appropriate prerequisites and the first two semesters (36 credits) of the professional program qualify for the Bachelor of Health Science Degree. Successful completion of the BHS is defined as:

1. An earned minimum grade of "C+" (2.33) or "S" (in a "S/U" course) in each DPT program course. The BHS program courses include PTH 400, PTH 410, PTH 415, PTH 416, PTH 418, PTH 420, PTH 425, PTH 426, PTH 428, PTH 430, PTH 440, PTH 445, PTH 450, PTH 455, PTH 457, and PTH 460.
2. No more than a cumulative total of five points earned on the grade–point scale throughout the physical therapy program (see DPT Student Handbook).
3. Students must be able to perform skills listed in the Technical Standards of Performance and demonstrate professional behaviors as outlined in the DPT Student Handbook.
4. Maintain a cumulative GPA of 2.50 or greater in all credits used to meet the BHS degree requirements.

DPT: Doctor of Physical Therapy

Upon successful completion of the professional phase of the program (116 credits) students earn the Doctor of Physical Therapy degree. All coursework scheduled for each semester must be successfully completed prior to advancing to the next semester. Successful completion of the DPT program is defined as:

1. Completion of a bachelor's degree (BHS or other).
2. An earned minimum grade of "C+" (2.33) or "S" in each DPT program course. DPT program courses include: PTH 400, PTH 410, PTH 415, PTH 416, PTH 418, PTH 420, PTH 425, PTH 426, PTH 428, PTH 430, PTH 440, PTH 445, PTH 450, PTH 455, PTH 457, PTH 460, PTH 540, PTH 601, PTH 602, PTH 610, PTH 611, PTH 612, PTH 620, PTH 621, PTH 622, PTH 625, PTH 627, PTH 632, PTH 635, PTH 637, PTH 640, PTH 645, PTH 646, PTH 647, PTH 650, PTH 651, PTH 652, PTH 661, PTH 662, PTH 680, PTH 711, PTH 712, PTH 721, PTH 722, PTH 726, PTH 728, PTH 736, PTH 748, PTH 765, PTH 768, PTH 770, PTH 799, PTH 870, PTH 880, PTH 881, PTH 882, PTH 883, PTH 884.
3. Maintain a cumulative DPT program GPA of 3.00.
4. No more than a cumulative total of five points earned on the grade–point scale throughout the physical therapy program (see DPT Student Handbook).
5. Students must be able to perform skills listed in the Technical Standards of Performance and demonstrate professional behaviors as outlined in the DPT Student Handbook.
6. Satisfactory completion of the practical and written comprehensive exams: PTH 770, PTH 870.
7. Satisfactory completion of a capstone project and presentation.
8. Satisfactory completion of five clinical internships and the associated "Clinical Performance Instrument."
9. Satisfactory completion of the exit interview.

Continued Enrollment Requirements

1. Progressive enrollment in the physical therapist education program requires successful completion of all Physical Therapy program course work including clinical education listed for the previous academic term.
2. A student whose cumulative GPA falls below 3.00 in any given academic term is placed on academic probation. Students who do not increase their cumulative GPA to 3.00 during the academic term of probation are normally asked to withdraw.
3. Students who receive less than a "C+" (2.33) or a "U" on a "S/U" course or clinical will be given "grade points" equal to the semester credit for the course. A student who accumulates six or more points will academically disqualify him/herself from continuing in the program.

- PTH 400 – Anatomy Credits: 4
- PTH 410 – Anatomy Laboratory Credits: 3
- PTH 415 – PT Assessment Skills Credits: 3
- PTH 416 – Pathokinesiology Credits: 3
- PTH 418 – General Medicine Credits: 2
- PTH 420 – Therapeutic Interventions Credits: 3
- PTH 425 – PT Assessment Skills Laboratory Credits: 3
- PTH 426 – Pathokinesiology Laboratory Credits: 2
- PTH 428 – General Medicine Laboratory Credits: 1
- PTH 430 – Therapeutic Interventions Laboratory Credits: 2
- PTH 440 – Pathophysiology I Credits: 3
- PTH 445 – Neuroscience Credits: 2
- PTH 450 – Neurology of Motor Control Credits: 1
- PTH 455 – Neuroscience Laboratory Credits: 1
- PTH 457 – Orthopedic Medicine Credits: 1
- PTH 460 – Topics in Comparative Religion Credits: 1–4
- PTH 540 – Pathophysiology II Credits: 2
- PTH 601 – Orthopedics I Credits: 2
- PTH 602 – Orthopedics II Credits: 2
- PTH 610 – Principles of Therapeutic Exercise Credits: 2
- PTH 611 – Orthopedics I Laboratory Credits: 2
- PTH 612 – Orthopedics II Laboratory Credits: 2
- PTH 620 – Principles of Therapeutic Exercise Laboratory Credits: 2
- PTH 621 – Scholarly Inquiry and Dissemination Credits: 2
- PTH 622 – Research Statistics Credits: 1
- PTH 625 – Cardiopulmonary Credits: 2
- PTH 627 – Orthotics and Prosthetics Credits: 1
- PTH 632 – Research Statistics Laboratory Credits: 1
- PTH 635 – Cardiopulmonary Laboratory Credits: 1
- PTH 637 – Orthotics and Prosthetics Laboratory Credits: 1
- PTH 640 – Pediatrics Credits: 2
- PTH 645 – Physical Therapy Administration and Leadership Credits: 4
- PTH 646 – Spirituality in Healthcare Credits: 2–3
- PTH 647 – Differential Diagnosis Credits: 2
- PTH 650 – Pediatrics Laboratory Credits: 2
- PTH 651 – Neurology I Credits: 2
- PTH 652 – Neurology II Credits: 2
- PTH 661 – Neurology I Laboratory Credits: 2
- PTH 662 – Neurology II Laboratory Credits: 2
- PTH 680 – Clinical Practicum Credits: 2
- PTH 711 – Clinical Reasoning I Credits: 1
- PTH 712 – Clinical Reasoning II Credits: 1
- PTH 721 – Clinical Reasoning I Laboratory Credits: 1
- PTH 722 – Clinical Reasoning II Laboratory Credits: 1
- PTH 726 – Geriatrics Credits: 2
- PTH 728 – Christian Finance Seminar Credits: 1
- PTH 736 – Psychosocial Issues in Healthcare Credits: 3
- PTH 748 – Educational Techniques for Health Care Professionals Credits: 1–2
- PTH 765 – Ethical & Legal Issues in Healthcare Credits: 1
- PTH 768 – Professional Compendium Credits: 1
- PTH 770 – Practical Comprehensive Examination Credits: 0
- PTH 799 – Research Project (topic) Credits: 1–2
- PTH 870 – Written Comprehensive Examination Credits: 0
- PTH 880 – PT Seminar Credits: 1
- PTH 881 – Clinical Internship I Credits: 4
- PTH 882 – Clinical Internship II Credits: 4
- PTH 883 – Clinical Internship III Credits: 5
- PTH 884 – Clinical Internship IV Credits: 5

Doctor of Science in Physical Therapy DScPT

This degree is designed to prepare the clinical specialist in orthopedic manual therapy and incorporates courses from the North American Institute of Orthopedic Manual Therapy.

Degree Requirements

The following degree requirements apply to students graduating from the DScPT program.

For Students with BS or Masters Degree – 64 credits

Satisfactory completion or competency in the following courses:

- PTH 500 – Doctoral Colloquium Credits: 2
- PTH 536 – NAIOMT Level I: Introduction to Fundamentals of Orthopedic Credits: 3
- PTH 537 – NAIOMT Level II: Intermediate Upper Quadrant Credits: 3
- PTH 538 – NAIOMT Level II: Intermediate Lower Quadrant Credits: 3
- PTH 541 – Physiological Basis for Exercise Prescription: Level I Credits: 3
- PTH 546 – NAIOMT Level III: Advanced Upper Quadrant Credits: 3
- PTH 547 – NAIOMT Level III: Advanced Lower Quadrant Credits: 3
- PTH 548 – NAIOMT Level IV: High Velocity Manipulation Credits: 3
- PTH 549 – Principles of Contemporary Leadership Credits: 3
- PTH 550 – NAIOMT Supervised Clinical Practice Credits: 1–4
  PTH 557 – NAIOMT: Thoracic Spine Credits: 2
- PTH 630 – Clinical Research Credits: 2
- PTH 615 – Clinical Pharmacology Credits: 2
- PTH 646 – Spirituality in Healthcare Credits: 2–3
- PTH 718 – Clinical Screening & Differential Diagnosis Credits: 3
- PTH 730 – Medical Diagnostics Credits: 2
- PTH 740 – Advanced Topics in Clinical Research Credits: 3
- PTH 748 – Educational Techniques for Health Care Professionals Credits: 1–2
- PTH 760 – Applications in Clinical Research Credits: 2
- PTH 798 – Capstone Experience Credits: 1–10
  Plus 7 approved elective credits

For Students with DPT Degree – 38 credits

Satisfactory completion or competency for the following courses:

- PTH 536 – NAIOMT Level I: Introduction to Fundamentals of Orthopedic Credits: 3
- PTH 537 – NAIOMT Level II: Intermediate Upper Quadrant Credits: 3
- PTH 538 – NAIOMT Level II: Intermediate Lower Quadrant Credits: 3
- PTH 546 – NAIOMT Level III: Advanced Upper Quadrant Credits: 3
- PTH 547 – NAIOMT Level III: Advanced Lower Quadrant Credits: 3
- PTH 548 – NAIOMT Level IV: High Velocity Manipulation Credits: 3
- PTH 549 – Principles of Contemporary Leadership Credits: 3
- PTH 550 – NAIOMT Supervised Clinical Practice Credits: 1–4
- PTH 557 – NAIOMT: Thoracic Spine Credits: 2
- PTH 760 – Applications in Clinical Research Credits: 2
- PTH 798 – Capstone Experience Credits: 1–10
  Plus 3 approved elective credits

For Students with DPT Degree Specialized – 38 credits

For students with a DPT degree who already have FAAOMPT or manual therapy certification from another approved institution, PTH 548 – NAIOMT Level IV: High Velocity Manipulation, PTH 549 – Principles of Contemporary Leadership, PTH 760 – Applications in Clinical Research, and PTH 798 – Capstone Experience are required, with the remaining curriculum being individually arranged by the director with the student's input.

For Students who completed Orthopedic Clinical Residency Program at AU – 39 Credits

For students with a DPT degree who have already completed the Orthopedic Clinical Residency Program

- PTH 546 – NAIOMT Level III: Advanced Upper Quadrant Credits: 3
- PTH 547 – NAIOMT Level III: Advanced Lower Quadrant Credits: 3
- PTH 548 – NAIOMT Level IV: High Velocity Manipulation Credits: 3
- PTH 549 – Principles of Contemporary Leadership Credits: 3
- PTH 550 – NAIOMT Supervised Clinical Practice Credits: 1–4
- PTH 760 – Applications in Clinical Research Credits: 2
- PTH 798 – Capstone Experience Credits: 1–10

Admission Requirements

The following admissions requirements apply.

1. Hold current licensure as a physical therapist in U.S. or Canada.
2. Proof of employment in an orthopedic setting, at least 20 hours per week.
3. Submit graduate application.
4. Submit a minimum of three satisfactory recommendations: one from a currently practicing physical therapist, one from a medical doctor, and one from another person familiar with the candidate.
5. Graduate of an accredited physical therapy school.
6. For candidates holding a bachelor's degree, with no advanced master's, receipt of PTET scores.
7. For candidates holding a master's degree or DPT degree, receipt of professional portfolio.

General Requirements

- A minimum of 32 credits must be taken at regular tuition for degree conferral.
- Level III Manual Therapy Certification through NAIOMT or equivalent certification from another approved program. Completed by registering for PTH 770 – Practical Comprehensive Examination
- A minimum of 2 years of part–time clinical practice (20 hours per week), or equivalent, in orthopedics, to be completed prior to the conferring of the degree.
- No grade lower than "C" (2.00) in any course.
- A minimum cumulative GPA of 3.00.
- Successful completion of the capstone project. Completed by registering for 6 credits of PTH 798 – Capstone Experience
- Satisfactory completion of the program exit interview

Transitional Doctor of Physical Therapy t–DPT

Degree Requirements – 35 credits

- PTH 500 – Doctoral Colloquium Credits: 2
- PTH 541 – Physiological Basis for Exercise Prescription: Level I Credits: 3
- PTH 549 – Principles of Contemporary Leadership Credits: 3
- PTH 590 – Topics in _____ Credits: 1–12
- PTH 615 – Clinical Pharmacology Credits: 2
- PTH 630 – Clinical Research Credits: 2
- PTH 646 – Spirituality in Healthcare Credits: 2–3
- PTH 718 – Clinical Screening & Differential Diagnosis Credits: 3
- PTH 730 – Medical Diagnostics Credits: 2
- PTH 740 – Advanced Topics in Clinical Research Credits: 3
- PTH 748 – Educational Techniques for Health Care Professionals Credits: 1–2
- PTH 750 – Professional Communication & Consulting Credits: 2
- PTH 760 – Applications in Clinical Research Credits: 2
- PTH 798 – Capstone Experience Credits: 1–10

Admission Requirements

The minimum requirements to be considered for admission are:

1. Hold current licensure as a physical therapist in U.S. or Canada.
2. Submit graduate application.
3. Submit a minimum of three satisfactory recommendations: one from a currently practicing physical therapist, one from a medical doctor, and one from another person familiar with the candidate.
4. Graduate of an accredited physical therapy school.
5. For candidates holding a bachelor's degree with no advanced master's, receipt of PTET scores.

General Requirements

- No grade lower than "C" (2.00) in any course.
- A minimum cumulative GPA of 3.00.
- Successful completion of the capstone project. Completed by registering for 4 credits of PTH 798 – Capstone Experience
- Satisfactory completion of the program exit interview

Certificates

Orthopedic Clinical Residency Program

This program is designed for the licensed physical therapist seeking to become a board certified orthopedic clinical specialist and is a jointly sponsored program between Andrews University and the North American Institute of Orthopedic Manual Therapy. Following successful completion of this program, students will receive a certificate of completion.

Certificate Requirements

The following certificate requirements apply to students successfully completing the orthopedic clinical residency program.

1. Satisfactory completion of the following courses – 17 credits:
   PTH 537 – NAIOMT Level II: Intermediate Upper Quadrant
   PTH 538 – NAIOMT Level II: Intermediate Lower Quadrant
   PTH 557 – NAIOMT: Thoracic Spine
   PTH 608 – Post Operative Management of Common Orthopedic Surgeries
   PTH 609 – Evidenced Based Orthopedic Clinical Practice: A Research Review
   PTH 730 – Medical Diagnostics
2. Successful completion of the oral/practical live patient examinations given through NAIOMT.
3. Successful completion of the NAIOMT supervised clinical hour requirement at an approved clinical mentorship site.
4. An earned minimum grade of "C" (2.00) or "S" (in a "S/U" course) in each program course.
5. A minimum cumulative GPA of 3.00.

Admission Requirements

The following admissions requirements apply.

1. Graduate of an accredited physical therapy program.
2. Hold or be in the process of obtaining licensure as a physical therapist in the U.S. or Canada.
3. Submit residency program application.
4. Submit a portfolio following program guidelines.
5. Submit a minimum of three satisfactory recommendations: one from the ACCE of the physical therapy program applicant attended; one from a faculty member of the physical therapy program applicant attended; one from a clinical supervisor the applicant interned with during physical therapy school. In the case of applicants who have been out of school longer than 3–5 years, the letters of recommendation may follow the same standards as the DScPT applicants.
6. Submission of a mission statement and reasons for applying to this program.

Physical Therapy–Professional & Post–Professional

PTH 400 – Anatomy

Credits: 4
A comprehensive study of human anatomy with emphasis on the nervous, skeletal, muscle, and circulatory systems. Introduction to basic embryology and its relation to anatomy and the clinical sciences concludes the course. Provides a solid morphological basis for a synthesis of anatomy, physiology, and the physical therapy clinical sciences. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 410. **College Code:** SHP

PTH 410 – Anatomy Laboratory

Credits: 3
Dissection and identification of structures in the cadaver supplemented with the study of charts, models, prosected materials and radiographs are used to identify anatomical landmarks and configurations. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 400. **College Code:** SHP

PTH 415 – PT Assessment Skills

Credits: 3
Introduction to assessment principles and examination skills utilized in all areas of physical therapy. The Guide to Physical Therapy Practice is referenced for the basic skills required in the assessment, intervention and documentation guidelines. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 425. **College Code:** SHP

PTH 416 – Pathokinesiology

Credits: 3
The study of human movement including an introduction to the basic concepts of biomechanics with an emphasis on human joint/muscle structures and function, advancing to analysis of body mechanics, normal gait analysis, and pathological movement analysis. Joint abnormalities will be identified using radiographs, related to the resultant movement dysfunction. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 400, PTH 410 and PTH 426. **College Code:** SHP

PTH 418 – General Medicine

Credits: 2
Clinical techniques applied to the examination, evaluation, treatment, and discharge planning of patients in general medical and acute–care. Emphasis on physical therapy intervention with relevant factors, management of pain and physical complications during medical treatment, and examination and treatment of special populations including wound and burn care. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 428. **College Code:** SHP

PTH 420 – Therapeutic Interventions

Credits: 3
Basic principles, physiologic effects, indications and contraindications, application and usage of equipment, and intervention rationale for hydrotherapy, thermal agents, wound care, massage, electrotherapy and mechanotherapy (traction) and other therapeutic interventions. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 430. **College Code:** SHP

PTH 425 – PT Assessment Skills Laboratory

Credits: 3
Basic examination skills including surface palpation of specific underlying muscle and bone structures, joint motion (goniometry), manual procedures for testing muscle strength, sensation, vital signs, limb girth and volumetric measurement will be practiced. Clinical application in basic physical therapy care procedures will be introduced. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 415. **College Code:** SHP

PTH 426 – Pathokinesiology Laboratory

Credits: 2
Biomechanical, and observational analysis, of normal and abnormal human movement. Integration of basic examination skills with gait and movement analysis. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 400, PTH 410 and PTH 416. **College Code:** SHP

PTH 428 – General Medicine Laboratory

Credits: 1
Practice in assessment modified for the acute–care environment. Applications include home–and work–place evaluation for architectural barriers, functional evaluation tools, casting, and modification of treatment for acute care including goal setting and professional note writing. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 418. **College Code:** SHP

PTH 430 – Therapeutic Interventions Laboratory

Credits: 2
Supervised practicum includes patient positioning and application of the therapy to obtain desired physiological response. Techniques of hydrotherapy, thermal agents, wound care, and massage, as well as specific electrotherapy and mechanotherapy treatments and assessment of physiological responses to those treatments. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 420. **College Code:** SHP

PTH 440 – Pathophysiology I

Credits: 3
Sequence studying disease processes affecting major body systems and the resulting anatomical and pathophysiological changes. Clinical presentations and pharmacological treatment of patients with those disease processes are presented, as well as diagnostic tests and laboratory values used to identify pathological conditions. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** PTH 400 and PTH 410. **College Code:** SHP

PTH 445 – Neuroscience

Credits: 2
Basic anatomy and functions of the central and peripheral nervous systems and their related structures. Pathways of the central and peripheral nervous system are examined along with a detailed study of each of the 12 pairs of cranial nerves. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 455. **Prerequisite(s):** PTH 400 and PTH 410. **College Code:** SHP

PTH 450 – Neurology of Motor Control

Credits: 1
An introduction to the function and interaction of the primary areas of the nervous system involved in controlling human movement, including the cortex, spinal cord, peripheral receptor system, basal ganglia, cerebellum, and the vestibular systems. Students are introduced to terminology and concepts associated with both normal function and pathology in these areas. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 455 – Neuroscience Laboratory

Credits: 1
Study of the prosected central and peripheral nervous tissues, models and charts. Imaging will be used to compare normal to abnormal CNS presentation. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 445. **Prerequisite(s):** PTH 400 and PTH 410. **College Code:** SHP

PTH 457 – Orthopedic Medicine

Credits: 1
Medical lectures covering selected topics in orthopedics, including common orthopedic diseases and the use of diagnostic testing and imaging in the orthopedic field. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 460 – Topics in Comparative Religion

Credits: 1–4
This course surveys the major religious traditions of the world. Study includes an overview of origins; major philosophical and theological underpinnings; typical aspects of worship and ethics; and major social, cultural, and political influences. Study is done from a consciously Christian framework. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable **College Code:** SHP

PTH 495 – Independent Study/Readings/Research/Projects

Credits: 1–4
Permission of department chair required prior to registration for all independent work. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable up to 8 credits **College Code:** SHP

PTH 500 – Doctoral Colloquium

Credits: 2
A degree orientation which will include portfolio development and assessment, development of the degree contract, usage of James White Library system, and introduction to the Guide to Physical Therapy Practice. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 507 – Applied Clinical Anatomy & Kinesiology

Credits: 3
Lecture/lab course studying regional anatomy and biomechanics as they relate to normal movement and the potential development of movement dysfunctions. Correlations between pathomechanics, clinical presentation of pathology and decision making for therapeutic interventions will be drawn. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 536 – NAIOMT Level I: Introduction to Fundamentals of Orthopedic

Credits: 3
Manual Therapy & Differential Diagnosis Appropriate skills in basic and objective selective tissue examination necessary for generating a provisional differential diagnosis of spinal dysfunction. Signs, symptoms, pathology, and management of common spinal pathologies are reviewed. Selective tissue tensioning techniques for the peripheral joints are introduced. Cyriax's principles are presented. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 537 – NAIOMT Level II: Intermediate Upper Quadrant

Credits: 3
A comprehensive biomechanical and anatomical review of the upper thoracic, upper and lower cervical spine, shoulder, elbow, wrist, and hand. Specific biomechanical assessment of each area is taught along with appropriate and effective treatment techniques for common injuries and mechanical dysfunctions. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 538 – NAIOMT Level II: Intermediate Lower Quadrant

Credits: 3
A comprehensive biomechanical and anatomical review of the lower thoracic and lumbar spines, the hip, knee, ankle, and foot. Specific biomechanical assessment of each area is taught along with appropriate and effective treatment techniques for common injuries and dysfunctions. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 540 – Pathophysiology II

Credits: 2
Sequence studying disease processes affecting major body systems and the resulting anatomical and pathophysiological changes. Clinical presentations and pharmacological treatment of patients with those disease processes considered, as well as diagnostic tests and laboratory values used to identify pathological conditions. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** PTH 440. **College Code:** SHP

PTH 541 – Physiological Basis for Exercise Prescription: Level I

Credits: 3
Using the system of Medical Exercise Therapy founded by Odvar Holten, this course covers the physiological basis for exercise prescription specifically related to the healing process. Testing strategies, formulas for exercise dosing and equipment conducive to this approach will be presented along with computer software developed to assist dosage and patient tracking. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 542 – Physiological Basis for Exercise Prescription: Level II

Credits: 2
Expanding on the knowledge presented in Level I, this course will go into more complex scenarios of patient impairments and more in depth spinal rehabilitation including advanced computer software training. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 545 – Advanced Clinical Physiology

Credits: 3
The review of human physiological function of the major body systems with clinical application to musculoskeletal, cardiovascular and pulmonary conditions. Detailed information on exercise physiology will be discussed along with clinical applications among patients with compromised health. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 546 – NAIOMT Level III: Advanced Upper Quadrant

Credits: 3
Builds on the techniques learned in Level II and helps the student understand the kinetic chain interrelationships of the upper quadrant. Integrates information generated in the assessment to understand how remote dysfunctions can be casual or contributory. Advanced techniques are demonstrated along with new material on temporo–mandibular–joint material and peripheral manipulation skills. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** PTH 537. **College Code:** SHP

PTH 547 – NAIOMT Level III: Advanced Lower Quadrant

Credits: 3
Builds on the techniques learned in Level II and helps the student understand the kinetic chain interrelationships in the lower quadrant. Presents advanced biomechanical tests and treatment and includes the sacroiliac and pubic joints. Discusses the integration of examination and treatment techniques. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** PTH 538. **College Code:** SHP

PTH 548 – NAIOMT Level IV: High Velocity Manipulation

Credits: 3
Instructs the student on the indications and contraindications, as well as the safe and effective application of spinal, pelvic, and costal manipulation techniques. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** PTH 546 and PTH 547. **College Code:** SHP

PTH 549 – Principles of Contemporary Leadership

Credits: 3
Theory and application of complexity sciences to organizational management; exploration of key leadership roles and changing paradigms; presentation of methods to maximize personal and professional life. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 550 – NAIOMT Supervised Clinical Practice

Credits: 1–4
Using a 3–to1 model, students will be required to do a minimum of 60 supervised clinical hours applying hands–on techniques with patients under the supervision of a certified NAIOMT clinical instructor, FAAOMPT, or other approved instructors. These hours can be split up into two 30–hour blocks, or other increments as agreed upon by the student and CI. No less than 15 hours can be registered for at any given time. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Repeatable:** Repeatable up to 4 credits **College Code:** SHP

PTH 557 – NAIOMT: Thoracic Spine

Credits: 2
Lecture/lab course studying the thoracic spine as a source of spinal dysfunction. Emphasis is placed on a biomechanical model for detailed examination and treatment of the thoracic spine and costovertebral dysfunction. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 589 – Professional Seminar

Credits: 1–2
Grade Mode: Normal (A–F,I,W) **College Code:** SHP

PTH 590 – Topics in _____

Credits: 1–12
Selected topics in physical therapy. Permission of department chair required. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** Specific prerequisites may be required for some subject areas. Topics in Comparative Religion (2) This course surveys the major religious traditions of the world. Study includes an overview of origins; major philosophical and theological underpinnings; typical aspects of worship and ethics; and major social, cultural, and political influences. Study is done from a consciously Christian framework. **Repeatable:** Repeatable **College Code:** SHP

PTH 601 – Orthopedics I

Credits: 2
Presentation of fundamental physical therapy knowledge in the assessment and intervention of a patient with both acute and chronic conditions of the extremities. Screening of the cervical and lumbar spine prior to tests is covered, progressing to complete assessment and treatment of extremity joint pathologies. Diagnostic tests and results pertinent to the orthopedic patient are related to a physical therapy differential diagnosis. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 611. **College Code:** SHP

PTH 602 – Orthopedics II

Credits: 2
A continuation of the presentation of information regarding orthopedic pathology of the spine with emphasis on treatment techniques for the different pathologies from a physician and physical therapist's perspective. A decision making model focusing on a differential diagnosis is incorporated throughout the course. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 612. **College Code:** SHP

PTH 608 – Post Operative Management of Common Orthopedic Surgeries

Credits: 2
This course covers the surgical techniques, guidelines for acute postoperative management and principles needed to safely design a rehabilitation program which will enable the patient to return to their previous level of function. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 609 – Evidenced Based Orthopedic Clinical Practice: A Research Review

Credits: 2
This course covers an up–to–date understanding of evidence supporting the evaluation and treatment of orthopedic pathologies. Keys to a working knowledge of contemporary research methodology and design along with the ability to analyze results of published studies from the perspective of statistical analysis will be presented. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 610 – Principles of Therapeutic Exercise

Credits: 2
Examines the systemic responses to exercise as related to both an acute nature and in response to training. Specific pathological conditions are discussed in relation to exercise testing and prescription, and a clinical decision making process is presented for working with additional pathological conditions. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 620. **College Code:** SHP

PTH 611 – Orthopedics I Laboratory

Credits: 2
Clinical application and practice in the special techniques to assess and treat acute and chronic orthopedic pathologies of the extremities and spine. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH601. **College Code:** SHP

PTH 612 – Orthopedics II Laboratory

Credits: 2
Designed for practice of the special techniques required in the assessment of intervention of acute and chronic orthopedic pathologies of the cervical, thoracic, and lumbar spine. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 602. **College Code:** SHP

PTH 615 – Clinical Pharmacology

Credits: 2
Develops a non–prescriptive knowledge of specific medications including indications, contraindications, precautions, adverse reactions, and dosage, especially as related to physiological effects of physical therapy interventions. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 620 – Principles of Therapeutic Exercise Laboratory

Credits: 2
Practical demonstration and experience with responses to exercise, testing procedures, and exercise prescription, focusing on activities appropriate for clinical situations. Tests and interventions noted in the Physical Therapy Guide to Practice are highlighted. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 610. **College Code:** SHP

PTH 621 – Scholarly Inquiry and Dissemination

Credits: 2
Introduction to the principles and practice of research, including designs, ethics, hypothesis testing and critical evaluation of clinical literature. Preparation and development of a graduate research proposal is interwoven throughout this course. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 622 – Research Statistics

Credits: 1
Fundamental procedures in collecting, summarizing, presenting, analyzing, and interpreting statistical data. Statistical tests applied to medical specialties. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 632. **College Code:** SHP

PTH 625 – Cardiopulmonary

Credits: 2
Lectures covering selected topics in cardiopulmonary medicine, focusing on clinical presentation, diagnostic tests, and medical and physical therapy interventions. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 635. **College Code:** SHP

PTH 627 – Orthotics and Prosthetics

Credits: 1
Prosthetic management of amputees, management of patients with disabilities requiring orthotic intervention, and application/management of traction and orthotic devices. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 637. **College Code:** SHP

PTH 630 – Clinical Research

Credits: 2
Introduces the student to basic concepts of biostatistics and research design and the formulation of evidence based practice theories. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 632 – Research Statistics Laboratory

Credits: 1
Practice in the computation of statistical data using appropriate formulas. Practical applications of techniques in research and statistical computations including probability, normal distribution, Chi Square, correlations, and linear regressions. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 622. **College Code:** SHP

PTH 635 – Cardiopulmonary Laboratory

Credits: 1
Emphasis on physical therapy assessment and intervention with cardiac and pulmonary patients. Practice of relevant techniques, such as stress testing, percussion, pulmonary function tests and breathing techniques, as well as other techniques identified in the Physical Therapy Guide to Practice. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 625. **College Code:** SHP

PTH 637 – Orthotics and Prosthetics Laboratory

Credits: 1
Practice of the physical therapy techniques required in the application of orthotic and prosthetic devices. Special attention given to gait and function. Selected topics such as wheelchair modifications, miscellaneous ortho–rehab apparatus, and other assistive/adaptive devices included. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 627. **College Code:** SHP

PTH 640 – Pediatrics

Credits: 2
An overview of embryologic development, followed by normal infant/child development to 5 years of age with an emphasis on motor development. Identification of assessment techniques for infants and children with normal and abnormal development. Description of various pediatric pathologies encountered in physical therapy with appropriate corresponding assessment and treatment approaches. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 650. **College Code:** SHP

PTH 645 – Physical Therapy Administration and Leadership

Credits: 4
A study of the organizational structures, operations, and financing of healthcare delivery institutions and an examination of the organization and interrelationship of their professional and support elements. Application of current health care management strategies and theory are related to the acute–care facility and independent practice. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 646 – Spirituality in Healthcare

Credits: 2–3
A discussion of spiritual values from a Christian perspective, how faith and spirituality facilitate the healing process, and how these can be incorporated into patient care. Attention will be given to discerning and addressing the spiritual needs of patients/clients, family members, and ancillary medical staff in a professional environment. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 647 – Differential Diagnosis

Credits: 2
Analysis of the decision–making process, with special focus on clinical guidelines, Physical Therapy Guide to Practice, and differential diagnosis. Differential diagnosis is addressed through comparison of systemic signs and symptoms, as well as appropriate diagnostic tests which may indicate involvement of a problem outside of the scope of PT practice. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 650 – Pediatrics Laboratory

Credits: 2
Practice of physical therapy assessment of the infant/child that addresses different developmental domains. Practice in the special techniques required in assessment and treatment of pediatric patients diagnosed with selected pathologies. Introduces current treatment approaches, such as Neurodevelopmental Treatment (NDT), with their effects on treatment goals. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 640. **College Code:** SHP

PTH 651 – Neurology I

Credits: 2
Review of basic neurophysiological mechanisms specific to nervous system dysfunction, related to clinical concepts in treatment of conditions affecting the nervous system, such as spinal cord injury, head injury, stroke, and selected peripheral pathologies. Emphasis on comparing and contrasting facilitation techniques. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 661. **College Code:** SHP

PTH 652 – Neurology II

Credits: 2
Continuation of PTH 651 – Neurology I, focusing on assessment and intervention with selected neurologic conditions. Common treatment techniques are compared with rationale for use of each. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 662. **Prerequisite(s):** PTH 651. **College Code:** SHP

PTH 655 – Program Continuation

Credits: 0
Students may register for this non–credit continuation course while clearing deferred grade (DG) and/or incomplete (I) courses. Registration for this course indicates active status. Requires program approval. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

PTH 661 – Neurology I Laboratory

Credits: 2
Clinical application, rehabilitation practice, and techniques applied to nervous system dysfunction. Intervention techniques for conditions affecting the nervous system, such as spinal cord injury, head injury, stroke, and selected peripheral pathologies. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 651. **College Code:** SHP

PTH 662 – Neurology II Laboratory

Credits: 2
Clinical application, rehabilitation practice, and techniques applied to basic physiological and neurophysiological mechanisms specific to nervous system dysfunction. Focus on techniques appropriate for use with neurologic patients and evaluation of patient response to treatment. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 652. **Prerequisite(s):** PTH 661. **College Code:** SHP

PTH 680 – Clinical Practicum

Credits: 2
Practice of the knowledge and skills developed in the classroom and laboratory in a patient–care setting. This practicum consists of 4 weeks full–time physical therapy experience in clinical facilities affiliated with the university. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

PTH 690 – Independent Study

Credits: 1–4
Individualized study and/or research in a specialized area under the guidance of an instructor. Permission from the department chair required prior to registration. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable up to 8 credits **College Code:** SHP

PTH 697 – Independent Learning Contract

Credits: 2
The student, working with their advisor and following degree/course guidelines, will develop an independent 40–hour learning contract with a qualified clinical specialist to facilitate intensive focused clinical training in a field of study of their choosing. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable **College Code:** SHP

PTH 711 – Clinical Reasoning I

Credits: 1
A course intended to enhance the skills associated with clinical reasoning within the Physical Therapy setting. It will address the thought process that enters into every aspect of patient care in the practice of physical therapy, from the history to the physical exam; the differential diagnosis to the development of the prognosis; the plan of intervention to the eventual discharge. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** Correquisite: PTH 721. **College Code:** SHP

PTH 712 – Clinical Reasoning II

Credits: 1
A continuation of PTH 711 Clinical Reasoning I. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 722. **Prerequisite(s):** PTH 711. **College Code:** SHP

PTH 718 – Clinical Screening & Differential Diagnosis

Credits: 3
Knowledge and clinical skills designed for screening patients for medical conditions. Differential diagnosis is addressed through comparison of systematic signs and symptoms. Appropriate diagnostic tests which may indicate involvement of a problem outside the scope of PT practice are addressed. Enhances professional communication with other healthcare practitioners included in the referral process. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 721 – Clinical Reasoning I Laboratory

Credits: 1
A continuation of PTH 711. Labs are designed to reinforce specific skills (evaluative or therapeutic) applicable to each lecture topic. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 711. **College Code:** SHP

PTH 722 – Clinical Reasoning II Laboratory

Credits: 1
A continuation of PTH 721 Clinical Reasoning I Laboratory. **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 712. **Prerequisite(s):** PTH 721. **College Code:** SHP

PTH 726 – Geriatrics

Credits: 2
Study of the unique characteristics of the geriatric patient, especially the physiological, psychological and social aspects, related to special needs in the physical therapy assessment, plan of care, and intervention. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 728 – Christian Finance Seminar

Credits: 1
This course emphasizes the principles of Christian stewardship in everyday life. It addresses stewardship not only as it relates to finances but also to other human resources such as time, and talent. It will also include the elements of personal and family budgeting and investing. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 730 – Medical Diagnostics

Credits: 2
Addresses imaging, body chemistry values and data derived from musculoskeletal, neurologic, vascular, cardiac and pulmonary testing with the purpose of understanding the disease process. Application of knowledge will determine differential diagnoses. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 736 – Psychosocial Issues in Healthcare

Credits: 3
An introduction to psychosocial responses to illness and disability, especially the interpersonal relationships between the therapist, the family and the patient. Common psychiatric disorders are discussed along with their clinical diagnosis, treatment regimes, projected outcomes and methods for handling these responses in clinical situations. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 740 – Advanced Topics in Clinical Research

Credits: 3
This course continues to cover the topic introduced in PTH 630 in a more in depth fashion. The student will learn how to set up a research study as well as review the literature and analyze the validity of the information presented. An introduction to setting up outcome studies will also be covered. **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 748 – Educational Techniques for Health Care Professionals

Credits: 1–2
Examines and applies educational theory to skills utilized by the physical therapist in the classroom, community, and clinical facility. Topics include the educational role of the physical therapist, the taxonomies of learning, learning styles, multiple intelligence, and educational technology. **Delivery:** Interactive online course **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 750 – Professional Communication & Consulting

Credits: 2
An introduction to the integration of the physical therapist as consultant. Discussion will include applying physical therapy consultation services to individuals, business, schools, government agencies and/or other organizations. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 760 – Applications in Clinical Research

Credits: 2
Information presented on how to develop and present a publishable quality case study. It also includes the actual practice of doing an outcomes study in the clinical environment. **Delivery:** Interactive online course **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **College Code:** SHP

PTH 765 – Ethical & Legal Issues in Healthcare

Credits: 1
Contemporary ethical issues are explored, including the relationships among peers, superiors, subordinates, institutions, clients, and patients. Illustrations include actual cases related to Christian biblical principles. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 768 – Professional Compendium

Credits: 1
Summarization of previous or added learning experiences relative to contemporary issues in physical therapy. An overview of the new graduate's role and responsibility to his/her patients and their families, employer, and community in the expanding physical therapy profession. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 770 – Practical Comprehensive Examination

Credits: 0
Grade Mode: Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable **College Code:** SHP

PTH 788 – Research Project Continuation

Credits: 0
Students register for this continuation course while completing their capstone project and not enrolled in other program courses. Registration for this course indicates full–time status which includes library privileges and access to an advisor. Requires advisor approval. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

PTH 798 – Capstone Experience

Credits: 1–10
Serves as an essential outcome component to augment the professional development and new learning that occurs in didactic course work of the post–professional doctoral degree and demonstrates the ability of the DPT/DScPT to make significant contributions to the profession and/or serve as a change agent in the field of physical therapy. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable **College Code:** SHP

PTH 799 – Research Project (topic)

Credits: 1–2
Provides students with guidelines and supervision for data collection, analysis, capstone project preparation and oral presentation. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable up to 3 credits **College Code:** SHP

PTH 870 – Written Comprehensive Examination

Credits: 0
Grade Mode: Satisfactory w/DG (S,U,I,W,DG) **Repeatable:** Repeatable **College Code:** SHP

PTH 880 – PT Seminar

Credits: 1
Preparation of a personal portfolio, assessment of the clinical experiences and preparation for professional licensure. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PTH 881 – Clinical Internship I

Credits: 4
Advanced full–time clinical experience (8–10 weeks each) in a variety of professional practice settings. One of the internships must be in outpatient orthopedics, inpatient, and a neurology setting. Thirty–six to forty hours per week. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

PTH 882 – Clinical Internship II

Credits: 4
Advanced full–time clinical experience (8–10 weeks each) in a variety of professional practice settings. One of the internships must be in outpatient orthopedics, inpatient, and a neurology setting. Thirty–six to forty hours per week. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

PTH 883 – Clinical Internship III

Credits: 5
Advanced full–time clinical experience (8–10 weeks each) in a variety of professional practice settings. One of the internships must be in outpatient orthopedics, inpatient, and a neurology setting. Thirty–six to forty hours per week. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

PTH 884 – Clinical Internship IV

Credits: 5
Advanced full–time clinical experience (8–10 weeks each) in a variety of professional practice settings. One of the internships must be in outpatient orthopedics, inpatient, and a neurology setting. Thirty–six to forty hours per week. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

Physical Therapy

PHTH 120 – Introduction to Physical Therapy

Credits: 2
An introduction to the profession of physical therapy with an overview of duties and responsibilities physical therapists perform. Partially fulfills the clinical observation prerequisites for admission to the professional program. Students must have their own transportation for the clinical observation. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

PHTH 417 – Human Anatomy

Credits: 3
Comprehensive study of human anatomy covering all systems of head, neck, trunk, and extremities. A solid morphological basis for a synthesis of anatomy, physiology, and clinical sciences provided. Dissection and identification of structures in the cadaver, and the study of charts, models, and prosected materials. Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Course Attribute:** Service course **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 427. **Prerequisite(s):** BIOL 221, BIOL 222 or BIOL 165, BIOL 166 or equivalent. See instructor for additional requirements. **College Code:** SHP

PHTH 427 – Human Anatomy Laboratory

Credits: 1
Study of the prosected extremity, head and neck anatomy, and dissection of the abdominal and thoracic organ systems. $ – Course or lab fee Swing course—Approved 400–499 courses qualify for graduate–level credit for graduate students **Course Attribute:** Service course **Grade Mode:** Normal (A–F,I,W) **Corequisite(s):** PTH 417. **Prerequisite(s):** same as for PTH 417. **College Code:** SHP

PHTH 480 – Physical Therapy Clinical Experience

Credits: 0–5
A course which provides hands–on, patient contact experiences in a variety of settings. The clinical experiences are coordinated to correspond to the requirements of the physical therapy program. As a facilitator, the clinical instructor will assist in developing the student's clinical thinking skills. The student is expected to become independent with the evaluation and treatment of noncomplex patients within that practice setting. **Grade Mode:** Satisfactory (S,U,I,W) **Repeatable:** Repeatable up to 5 credits **College Code:** SHP

PHTH 590 – Topics in _____

Credits: 1–4
Selected topics in physical therapy. Permission of department chair required. **Course Attribute:** Service course **Prerequisite(s):** Specific prerequisites may be required for some subject areas. **Repeatable:**
Repeatable.
College Code: SHP
College Code: SHP

Speech–Language Pathology & Audiology

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269–471–3468
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www.andrews.edu/speech/

Faculty
Darah J. Regal, Chair
Brynja K. Davis
Heather Ferguson

Mission

The Andrews University Department of Speech–Language Pathology and Audiology (SPLAD) provides faith–affirming Christian education. The sequence of experiences focuses on the knowledge and practices for a career in the discipline. Students will:

- Become knowledgeable about human communication and potential disorders
- Uphold the ethical and Christian principles regardless of age, gender or ethnicity
- Be prepared to provide high quality, effective clinical service.

Program Description

The Department of Speech–Language Pathology and Audiology offers three bachelor degree options. The professional degree tracks, Bachelor of Science (BS) degree or Bachelor of Arts/Bachelor of Science (BA/BS) joint degree with Spanish, prepare students for advanced degree(s) required for certification. (MA in SLP or Doctorate in AuD not currently offered at Andrews)

The Bachelor of Health Science degree: Wellness with an emphasis in speech–language pathology and audiology prepares students for a career in either a medical or educational setting. This is not a preparatory degree for an advanced (graduate) degree in either speech–language pathology or audiology. Prior to application and acceptance into either the BS or BA/BS degree, students are accepted into the BHS Wellness/SPLAD (pre–professional track).

General education and cognate requirements for the freshman and sophomore years are the same for all three bachelor degrees.

Admission Requirements for Professional Program BS or BA/BS

All students seeking acceptance into the professional program BS degree or the BA/BS joint degree must apply during their sophomore year (no later than July 15 for transfer students) for acceptance into the professional program for the following fall semester. Successful completion of pre–requisite courses and a cumulative GPA of 3.0 are minimum requirements for students who desire to apply to the BS or BA/BS joint degree. Students must complete all segments of the application process, and receive a letter of acceptance before entering the BS or BA/BS major in speech–language pathology and audiology.

Transfer students who have completed at least 3 full–time college semesters or have completed at least (40 credits) will need to complete two applications, one for the university and one for the department. The results of the application process will determine which bachelor's degree the student has been accepted in to.

Individuals desiring to become SLP's must obtain a master's degree. Individuals desiring to become audiologists must obtain a clinical doctorate (AuD) degree. Details of graduate programs are available through the department office. Download SPLAD application

Bachelors

Speech–Language Pathology and Audiology BS

Professional Degree Requirements

- SPPA 234 – Introduction to Speech–Language Pathology and Audiology Credits: 3
- SPPA 270 – Preclinical Observation Credits: 1
- SPPA 280 – Anatomy and Physiology of Speech and Hearing Credits: 4
- SPPA 285 – Applied Phonetics Credits: 3
- SPPA 310 – Speech Science Credits: 3
- SPPA 321 – Normal Language Development Credits: 3
- SPPA 322 – Child Language Disorders Credits: 3
- SPPA 331 – Basic Audiology Credits: 3
- SPPA 332 – Audiological Procedures Credits: 3
- SPPA 374 – Articulation and Phonology: Development and Disorders Credits: 3
- SPPA 425 – Clinical Principles and Practices Credits: 3
- SPPA 447 – Disorders of Voice and Fluency Credits: 3
- SPPA 455 – Adult Neurogenic Disorders Credits: 3
- SPPA 458 – Aural Rehabilitation Credits: 3
- SPPA 471 – Clinical Practicum in Speech–Language Pathology Credits: 2
- SPPA 472 – Clinical Practicum in Audiology Credits: 2

Cognates:

- PHYS 225 – Sound and Waves Credits: 4 (Meets the General Education Life/Physical Science requirement)
- STAT 285 – Elementary Statistics Credits: 3

Recommended Courses:

- COMM 436 – Intercultural Communication Credits: 3
- ENGL 460 – Linguistics Credits: 3
- BHSC 230 – Research Methods I: Statistics for the Behavioral Sciences Credits: 3
- BIOL 100 – Human Biology Credits: 4
- BIOL 208 – Environmental Science Credits: 4
- BIOL 221 – Anatomy and Physiology I Credits: 4
- PSYC 301 – Human Development—Lifespan Credits: 3

General Education Requirements

See the Professional Program Requirements, and note the following **specific** requirements:

Religion:

professional degree requirements

Language/Communication:

professional degree requirements

History:

professional degree requirements

Fine Arts/Humanities:

professional degree requirements

Life/Physical Sciences:

- SPPA 280 – Anatomy and Physiology of Speech and Hearing Credits: 4
- PHYS 225 – Sound and Waves Credits: 4
- plus a required biology course—either BIOL 100 or BIOL 208 are recommended

Mathematics:

- STAT 285 – Elementary Statistics Credits: 3

Computer Literacy:

- INFS 120 – Foundations of Information Technology Credits: 3 or pass competency exam

Service:

- SPPA 250 – Fieldwork Credits: 2 **or**
- SPPA 471 – Clinical Practicum in Speech–Language Pathology Credits: 2 **or**
- SPPA 472 – Clinical Practicum in Audiology Credits: 2

Social Sciences:

professional degree requirements

- PSYC 301 – Human Development—Lifespan Credits: 3 recommended

Fitness Education:
professional degree requirements

Total Credits: 45

Wellness, Speech–Language Pathology and Audiology Emphasis BHS
The Bachelor of Health Science: Wellness with an emphasis in speech–language pathology and audiology (BHS) does not have a separate departmental application process. To remain in the BHS program a cumulative GPA of 2.50 is required.

Total Credits: 60

Major Requirements

Core Requirements
- HLED 210 – Philosophy of Health Credits: 3
- HLED 445 – Consumer Health Credits: 2
- FDNT 230 – Nutrition Credits: 3
- FDNT 448 – Nutrition and Wellness Credits: 3
- FDNT 460 – Seminar Credits: 1–2
- FTES 205 – Fitness Conditioning Credits: 1

Speech–Language Pathology and Audiology Emphasis
- SPPA 234 – Introduction to Speech–Language Pathology and Audiology Credits: 3
- SPPA 270 – Preclinical Observation Credits: 1
- SPPA 280 – Anatomy and Physiology of Speech and Hearing Credits: 4
- SPPA 285 – Applied Phonetics Credits: 3
- SPPA 310 – Speech Science Credits: 3
- SPPA 321 – Normal Language Development Credits: 3
- SPPA 322 – Child Language Disorders Credits: 3
- SPPA 331 – Basic Audiology Credits: 3
- SPPA 374 – Articulation and Phonology: Development and Disorders Credits: 3

Choose one of the following courses:
- SPPA 332 – Audiological Procedures Credits: 3
- SPPA 425 – Clinical Principles and Practices Credits: 3

Cognates
Choose two of the following:
- BIOL 260 – General Microbiology Credits: 4
- MLSC 230 – Fundamentals of Clinical Microbiology Credits: 3
- PHYS 141 – General Physics I Credits: 4
- PHYS 225 – Sound and Waves Credits: 4
- SPPA 280 – Anatomy and Physiology of Speech and Hearing Credits: 4

Choose one:
- BIOL 100 – Human Biology Credits: 4
- BIOL 221 – Anatomy and Physiology I Credits: 4

General Education
See professional program requirements and note the following specific requirements:
- COMM 104 – Communication Skills Credits: 3
- ENGL 115 – English Composition I Credits: 3
- ENGL 215 – English Composition II Credits: 3
- HLED 120 – Fit for Life Credits: 1

Choose one:
- HIST 117 – Civilizations and Ideas I Credits: 3
- HIST 118 – Civilizations and Ideas II Credits: 3

Choose one:
- MATH 145 – Reasoning with Functions Credits: 3
- STAT 285 – Elementary Statistics Credits: 3

Choose one or similar PYSC course
- PSYC 101 – Introduction to Psychology Credits: 3
- PSYC 301 – Human Development—Lifespan Credits: 3

- One religion course per academic year of attendance in a Seventh–day Adventist college or university.

Bachelors Dual Degrees

Speech–Language Pathology and Audiology/Spanish Studies Joint Degree, BA/BS
This program integrates the study of the Spanish language and culture with preparation in the field of Speech–Language Pathology and Audiology. The main goal of this degree is to prepare students to serve in both a medical as well as in an educational setting. Students will participate in clinical practicum/internships in which they will have the opportunity to apply the knowledge acquired in classes. It is required that students attend to one of the ACA programs for a full year.

Students in this joint degree will receive two separate but integrated degrees: a Bachelor of Arts with a major in Spanish Studies and a Bachelor of Sciences with a major in Speech–Language Pathology and Audiology.

Spanish Studies/Speech–Language Pathology and Audiology Joint Degree, BA/BS
This program integrates the study of the Spanish language and culture with preparation in the field of Speech–Language Pathology and Audiology. The main goal of this degree is to prepare students to serve in both a medical as well as in an educational setting. Students will participate in clinical practicum/internships in which they will have the opportunity to apply the knowledge acquired in classes. It is required that students attend to one of the ACA programs for a full year.

Students in this joint degree will receive two separate but integrated degrees: a Bachelor of Arts with a major in Spanish Studies and a Bachelor of Sciences with a major in Speech–Language Pathology and Audiology.

Total Credits – 140

Spanish Studies Requirements – 42

ACA Requirements – 18
Choose one course from each of the following sets:
- SPAN 351, 352, 353
- SPAN 361, 362, 363
- SPAN 371, 372, 373
- Plus 9 Spanish credits at the 300–400 level

AU Cognates – 6
Choose one of the following sets:
- SPAN 171 – Elementary Spanish I Credits: 3
- SPAN 172 – Elementary Spanish II Credits: 3
- SPAN 275 – Intermediate Spanish Credits: 4

AU Requirements – 18
- SPAN 325 – Spanish for the Medical Professions Credits: 3
- SPAN 420 – Advanced Spanish Written and Oral Communication Credits: 3
- SPAN 426 – Contemporary Spain Credits: 3
- SPAN 436 – Spanish–American Culture Credits: 3
- SPAN 447 – Spanish for Translation Credits: 3
- SPAN 449 – Spanish for Interpreters Credits: 3
- SPAN 456 – Spanish for Speech Pathologists and Audiologists Credits: 3

Speech–Language Pathology & Audiology Requirements – 45

- SPPA 234 – Introduction to Speech–Language Pathology and Audiology Credits: 3
- SPPA 270 – Preclinical Observation Credits: 1
- SPPA 280 – Anatomy and Physiology of Speech and Hearing Credits: 4
- SPPA 285 – Applied Phonetics Credits: 3
- SPPA 310 – Speech Science Credits: 3
- SPPA 321 – Normal Language Development Credits: 3
- SPPA 322 – Child Language Disorders Credits: 3
- SPPA 331 – Basic Audiology Credits: 3
- SPPA 332 – Audiological Procedures Credits: 3
- SPPA 374 – Articulation and Phonology: Development and Disorders Credits: 3
- SPPA 425 – Clinical Principles and Practices Credits: 3
- SPPA 447 – Disorders of Voice and Fluency Credits: 3
- SPPA 455 – Adult Neurogenic Disorders Credits: 3
- SPPA 458 – Aural Rehabilitation Credits: 3
- SPPA 471 – Clinical Practicum in Speech–Language Pathology Credits: 2
- SPPA 472 – Clinical Practicum in Audiology Credits: 2

General Education Requirements BA/BS

For General Education requirements follow the General Education Professional Program

Undergraduate Minors

Speech–Language Pathology and Audiology Minor

Students in education, communication, and behavioral science find a speech–language pathology and audiology minor helpful for increasing their awareness and understanding of people with speech, language, and hearing impairments. The minor also gives students with another major the necessary background to pursue graduate studies in speech–language pathology or audiology.

Degree Requirements

- SPPA 234 – Introduction to Speech–Language Pathology and Audiology Credits: 3
- SPPA 270 – Preclinical Observation Credits: 1
- SPPA 280 – Anatomy and Physiology of Speech and Hearing Credits: 4
- SPPA 285 – Applied Phonetics Credits: 3
- SPPA 321 – Normal Language Development Credits: 3
- SPPA 322 – Child Language Disorders Credits: 3
- SPPA 331 – Basic Audiology Credits: 3
- SPPA 374 – Articulation and Phonology: Development and Disorders Credits: 3

Total Credits: 23

Speech–Language Pathology & Audiology

SPPA 234 – Introduction to Speech–Language Pathology and Audiology

Credits: 3
An introduction to the professions of speech–language pathology and audiology, this course surveys the possible etiologies and characteristics of various communication problems encountered by clinicians. Language and communication differences in a multicultural society are also examined. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

SPPA 250 – Fieldwork

Credits: 2
Students participate in experiences in the community related to the professions of speech–language pathology and audiology. Open to majors who have applied one semester in advance. Meets the general education fieldwork requirement. Does not apply to major or minor. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable **College Code:** SHP

SPPA 270 – Preclinical Observation

Credits: 1
Students observe and write reports on a total of 25 hours of therapy and/or diagnostic sessions in the areas of speech–language pathology and audiology. They also participate in discussions of procedures used by the professionals during therapeutic interventions. **Grade Mode:** Satisfactory w/DG (S,U,I,W,DG) **College Code:** SHP

SPPA 280 – Anatomy and Physiology of Speech and Hearing

Credits: 4
The study of the anatomy and physiology of respiration, hearing, phonation, articulation, and the central nervous system. Students participate in a gross–anatomy human cadaver lab. Weekly: 3 lectures and a 2–hour lab $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

SPPA 285 – Applied Phonetics

Credits: 3
A study of the International Phonetic Alphabet and its application to speech and hearing sciences. Includes an introduction to acoustic theory and spectrographic analysis of speech. Skill is developed in transcription of both normal and disordered speech in children and adults. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

SPPA 310 – Speech Science

Credits: 3
An exploration of the theoretical information regarding speech perception and hearing, using concepts of physics, anatomy, and physiology. Clinical applications and management strategies for specific speech and hearing disorders will also be addressed. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** SPPA 234, SPPA 280. **College Code:** SHP

SPPA 321 – Normal Language Development

Credits: 3
A comprehensive look at the normal development of speech and language in the child; includes the areas of language prerequisite skills, phonology, morphology, semantics, syntax and pragmatics. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

SPPA 322 – Child Language Disorders

Credits: 3
A study of the factors contributing to the development of disordered speech and language. Includes traditional and more recent classification systems and a survey of characteristic disorders. Introduction to methods of evaluation and therapy. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** SPPA 321. **College Code:** SHP

SPPA 331 – Basic Audiology

Credits: 3
Survey of the normal auditory system and the pathologies that affect its functioning. Includes the physics of sound, standard reference levels, and auditory perception. Methods of administering and interpreting pure tone, speech threshold, and speech recognition tests are presented in classroom and lab settings. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

SPPA 332 – Audiological Procedures

Credits: 3
Continued study of auditory testing with an overview of differential diagnostic tests in the identification of auditory pathologies. Includes clinical masking and acoustic immittance measures. Techniques are presented for evaluating special populations including infants and young children, industrial, and the pseudo–hypacusic. $ – Course or lab fee **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** SPPA 331. **College Code:** SHP

SPPA 374 – Articulation and Phonology: Development and Disorders

Credits: 3
A survey of phonological development, and characteristics of articulation and phonology disorders. Discussion of etiologies, assessment, and management of these disorders is included. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** SPPA 285. **College Code:** SHP

SPPA 415 – Seminar in Communication Disorders:_____

Credits: 3
Advanced study into professional and/or clinical aspects of speech–language pathology and/or audiology. **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable with different topics **College Code:** SHP

SPPA 425 – Clinical Principles and Practices

Credits: 3
Discussion of principles underlying clinician/client relationships and interventions for communication disorders. Instruction in clinical management for speech–language pathology, including developing instructional programs, obtaining target behaviors, record keeping, and report writing. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** SPPA 321, SPPA 322. **College Code:** SHP

SPPA 435 – Communication Development and Disorders for Classroom Teachers

Credits: 3
An overview of normal language acquisition and development, including a survey of typical communication disorders and their impact on students' academic success. Issues such as public laws and policies affecting the communicatively handicapped, language and communication differences in multicultural populations, and collaborative management models are also addressed. **Grade Mode:** Normal (A–F,I,W) **College Code:** SHP

SPPA 447 – Disorders of Voice and Fluency

Credits: 3
A study of the anatomy and physiology of the vocal mechanism; with emphasis on normal and abnormal processes of voice and fluency. Assessment and treatment principles of functional, organic and neurological voice pathologies will be addressed, as well as basic principles of stuttering diagnosis and therapy. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** SPPA 234, SPPA 280, SPPA 310. **College Code:** SHP

SPPA 455 – Adult Neurogenic Disorders

Credits: 3
A study of neuroanatomy, as well as the interaction of language and cognition, and hemispheric specialization. This course also covers the classification, etiology, and assessment of individuals with speech, cognitive–linguistic, and swallowing disorders associated with central nervous system damage. Therapeutic principles are introduced. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** SPPA 234, SPPA 280, SPPA 321. **College Code:** SHP

SPPA 458 – Aural Rehabilitation

Credits: 3
A conceptual approach to the rehabilitation of the hearing–impaired. Methods of management which optimize the use of residual hearing with amplification or other assistive devices are considered for patients from birth to geriatric. **Grade Mode:** Normal (A–F,I,W) **Prerequisite(s):** SPPA 331, SPPA 332. **College Code:** SHP

SPPA 471 – Clinical Practicum in Speech–Language Pathology

Credits: 2
Supervised practice in clinical management of persons with communication disorders, including administration of tests and implementation of therapy programs. A content course in practicum area; 25 hours of observation in speech–language pathology and audiology. $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** SPPA 321, SPPA 322, SPPA 374; **Repeatable:** Repeatable **Special Approval:** Instructor permission required. **College Code:** SHP

SPPA 472 – Clinical Practicum in Audiology

Credits: 2
Supervised practice in test administration, report writing, and clinical management of persons with communication disorders related to audiology. $ – Course or lab fee **Grade Mode:** Normal with DG (A–F,I,W,DG,DN) **Prerequisite(s):** SPPA 331,SPPA 332, permission of instructor, and 25 hours of observation in speech–language pathology and audiology. **Prerequisite/Corequisite:** SPPA 458. **College Code:** SHP

SPPA 478 – Study Tour:

Credits: 0
Travel to destinations relevant to individual programs of study. Classes will be selected from department(s) offerings. Fee may be required. $ – Course or lab fee **Grade Mode:** Noncredit (NC,W) **Repeatable:** Repeatable **College Code:** SHP

SPPA 480 – Topics in _____

Credits: 1–2
Selected topics in audiology and speech–language pathology. Consult current class schedule for topics offered each year. **Grade Mode:** Normal (A–F,I,W) **Repeatable:** Repeatable with different topics **College Code:** SHP

SPPA 495 – Independent Research/Project

Credits: 1–4
Arranged on a contract basis with a faculty member. **Grade Mode:** Normal w S/DG (A–F,I,S,U,DG,W) **Repeatable:** Repeatable **College Code:** SHP