

# COLLEGE OF ARTS AND SCIENCES

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## PRE-PROFESSIONAL PROGRAMS

Although essentially a liberal arts college, the College of Arts and Sciences 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 at <http://www.amerchiro.org>.

The courses listed below at a minimum grade level of C and 60 credits satisfy the requirements for Palmer College of Chiropractic.

### Pre-chiropractic Curriculum

Biology (111, 112; 113 recommended)—7; 8  
 General Chemistry—8  
 Organic Chemistry—8  
 General Physics—8  
 English Composition and/or Communication Skills—6  
 Introduction to Psychology—3  
 Social Sciences/Humanities—15

## 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: <http://www.ascp.org>.

## DENTAL ASSISTANT AND DENTAL HYGIENE

James Hayward, Coordinator  
 (269) 471-3241  
 Price Hall (Science Complex)

Students interested in a dental assistant career should obtain information concerning the program from the school to which they wish to apply.

Students planning a career in dental hygiene should complete two years of college work before entering a professional school.

Upon completion of an additional two years of prescribed college work at a professional school, the student will earn a Bachelors degree in dental hygiene. For more information about dental hygiene, contact the American Dental Hygienists' Association (<http://www.adha.org>).

The following courses are recommended for the first two years before entering Loma Linda University. Students interested in applying to other professional schools should obtain specific entrance requirements for those schools.

### Pre-dental Hygiene Curriculum

Cultural and Spiritual Heritage—14 (must include 2 areas)

#### *Cultural*—

History/civilization, literature, fine arts (theory), foreign language, philosophy, ethics.

*Religion*—3 units per year of attendance at a SDA college.

Required only of students applying from Adventist or other religious colleges/universities.

Scientific Inquiry and Analysis—23

Physical/Natural Sciences—15

\*Chemistry—one academic year covering inorganic, organic, and biochemistry; \*human anatomy and human physiology—two separate or sequential courses; \*microbiology)

Social Science—8 (must include 2 areas)

\*Introduction to sociology; remaining credits in anthropology (cultural anthropology recommended), economics, geography, political science, psychology

Communication Skills—9

\*Freshman English, one complete sequence for BS degree;

\*speech/interpersonal communication/persuasion); computers

Health and Wellness—2

*Health* (personal health or nutrition)

*Physical education* (2 activity courses)

\*required courses

## DENTISTRY

James Hayward, Coordinator  
 (269) 471-3241  
 Price Hall (Science Complex)

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 (<http://www.aads.jhu.edu>) and the American Dental Association (<http://www.ada.org>).

Required courses for applicants to Loma Linda University:  
 English Composition—6  
 Foundations of Biology—10  
 General Chemistry—8  
 Organic Chemistry—8  
 General Physics—8

*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**

## 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: <http://www.ahima.org>.

## LAW

Brent Geraty, Coordinator  
 (269) 471-6530, [bgeraty@andrews.edu](mailto:bgeraty@andrews.edu)  
 Nethery Hall, 122-C

Law schools prescribe no particular college program. Therefore, a pre-law student may select her major(s) and minor(s) according to interest and aptitude without adversely affecting admission to law school. The prospective lawyer's education should be as broad as possible, including the development of writing and reading skills, logical and analytical thinking, and understanding of legal, political, social and economic issues and institutions. Because competition for admission to reputable law schools is intense, it is important to maintain a high level of academic achievement.

Students who want to go on to law school should consult frequently with the pre-law advisor, certainly at least once per year and preferably more often. The Pre-Law Society, a student-led and student-run organization, provides additional opportunities and resources for the pre-law student.

The web site for the Law School Admission Council ([www.lsac.org](http://www.lsac.org)) provides a great deal of helpful information and is a good resource for students who are interested in preparing for, and getting into, law school.

## MEDICINE

Gordon J. Atkins: (269) 471-3263  
 H. Thomas Goodwin: (269) 471-3242  
 Bill Chobotar: (269) 471-3262  
 Marcia A. Kilsby: (269) 471-6294  
 D. David Nowack: (269) 471-6065  
 Steven E. Warren: (269) 471-3277  
 Science Complex

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 (<http://www.aamc.org>) and the American Association of Colleges of Osteopathic Medicine (<http://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.

## Required Courses for Applicants to Loma Linda University School of Medicine

English Composition/Writing Seminar—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.

## OCCUPATIONAL THERAPY

Bill Chobotar, Coordinator  
 (269) 471-3262

Price Hall (Science Complex)

The occupational therapist helps people cope with psychological or physiological dysfunction.

## Pre-occupational Therapy Curriculum for Master of Occupational Therapy (MOT)

### LLU Requirements and AU Equivalents

Religion

*LLU:* 4 credits/yr. (only for students from Adventist colleges/universities)

*AU:* A general education religion course (3 credits each year)

Cultural Heritage

*LLU:* 12 credits from Cultural Diversity and areas of art/music (2-credit limit in performing arts), literature, philosophy, history of civilization—American, and any foreign language

*AU:* ANTH 124 or 200; select remainder from ARTH220; MUHL214; ENGL225, 275, 276; PHIL224; HIST117, 118, 204, 205; any foreign language

Physical/Natural Sciences

*LLU:* anatomy and physiology sequence, 1 quarter chemistry, 1 quarter physics/lab; math—2 years HS with at least a grade of C

*AU:* BIOL111-113; CHEM110; PHYS105; MATH107 (no credit)

Social Sciences

*LLU:* anthropology, sociology, general psychology; Growth and Development; and select one other behavioral science

*AU:* Required: ANTH124; SOCI119; PSYC101; EDPC301; and select from other ANTH, PSYC, or SOCI courses

Communication

*LLU:* Freshman English—complete sequence; Speech;

Computer; select additional from computer science and persuasion

*AU:* ENGL115, 215; COMM104; INSF110; select additional from COMM320, 405; INSF215

Health and Wellness

*LLU:* Health Education: 4-5 credits (personal health or nutrition)

*AU:* HLED120 and 2 activity credits

Electives—to meet total of 64 credits

Required Work Experience—40 hours (minimum) of work/observation experience of volunteer or paid employment in an occupational therapy department.

Grades of C- or below will not be transferred.

**OPTOMETRY**

James L. Hayward, Coordinator  
(269) 471-3241  
Price Hall (Science Complex)

As a general rule, a minimum of two years of college work is required by optometry school. However, most students entering optometry schools have completed three or four years of college. The following courses with minor variations meet the entrance requirements of most optometry schools. For more information, contact the American Optometric Association (<http://www.aoanet.org>) and the Association of Schools and Colleges of Optometry (<http://www.opted.org>).

**Pre-optometry Suggested Courses**

English Composition, Writing Seminars—8  
Foundations of Biology—10  
General Chemistry—8  
General Physics—8  
Introduction to Psychology—3  
Mathematics—6  
Microbiology or Bacteriology—3  
Organic Chemistry—8  
Physical Education—2  
Religion—6  
Social Sciences—8  
Statistics—3

**PHARMACY**

D. David Nowack, Coordinator  
(269) 471-6065  
Halenz Hall (Science Complex)

Entrance requirements to colleges of pharmacy vary; therefore, it is imperative that students familiarize themselves with the requirements of the school of their choice. (Ferris State University [FSU], Wayne State University, and University of Michigan operate accredited colleges of pharmacy in the state of Michigan.) Information about the various schools of pharmacy can be found on the American Associate of Colleges of Pharmacy website: <http://www.aacp.org>. The doctor of pharmacy curriculum requires 2 years of pre-pharmacy and 4 years of professional pharmacy education.

The following prepharmacy courses are those required by FSU. FSU offers a calculus course in the summer that satisfies the pre-pharmacy requirements and require the PCAT for admission. Science courses with a grade of D are not transferable.

**Pre-pharmacy Curriculum**

General Chemistry—8  
English Composition—6  
Foundations of Biology—10  
Communication (COMM104 or 320)—2 or 3  
Intro. to Psych. or Principles of Sociology—3  
Elementary Statistics (STAT340 or 285)—3  
General Microbiology—4  
Organic Chemistry—8  
Calculus (MATH141)—4  
Macroeconomics—3  
Cultural Enrichment (one at 200 level)—9

**PHYSICAL THERAPY**

Dixie Scott, Advisor  
(269) 471-6490  
Physical Therapy Building

Andrews University offers a structured pre-physical therapy education program to assist students wishing to transfer into Andrews University's physical therapist entry-level professional education program. See the professional education program in the College of Arts and Sciences section of this bulletin for the specific prerequisite course details. The same advisor will be able to assist the students who may wish to complete their prerequisite courses at Andrews University and transfer later to another university to continue their professional education.

**PHYSICIAN ASSISTANT**

Gordon J. Atkins: (269) 471-3263  
Bill Chobotar: (269) 471-3262  
H. Thomas Goodwin: (269) 471-3242  
Price Hall (Science Complex)  
D. David Nowack: (269) 471-6065  
Halenz Hall (Science Complex)

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: <http://www.aapa.org>.

**PUBLIC HISTORY**

Gary G. Land, Coordinator  
(269) 471-3511  
Nethery Hall

Public or applied history refers to careers in history-related fields other than teaching, including museum management, archival management, and historic preservation, as well as the production of historical media programs. In most cases, a master's degree in a public or applied history program or certification upon completion of certain graduate courses are needed prior to employment. The Department of History and Political Science recommends as curricula a major in history with a second major or minor and electives as the most advantageous undergraduate basis for a public-history career. Curriculum recommendations are available from the department chair.

**RESPIRATORY CARE**

Bill Chobotar, Coordinator  
(269) 471-3262  
Price Hall (Science Complex)

Andrews University offers prerequisite course work to prepare students who wish to enter a 2-year Associate of Science degree

program or a 4-year Bachelor of Science degree program in Respiratory Care. Admission requirements vary among professional respiratory care programs. Not all professional programs accept transfer credits. Therefore, as soon as possible, interested students should contact the programs of choice for the most current prerequisite requirements. A list of accredited respiratory care programs may be obtained from the American Association for Respiratory Care, 11030 Ables Lane, Dallas, TX 75229 (phone 972-243-2272 and ask for the Education Department) or explore the web at [http://www.aarc.org/patient\\_resources/schools.html](http://www.aarc.org/patient_resources/schools.html).

Loma Linda University: Interested students may complete the prerequisites for Loma Linda University's Respiratory Care Education Program while attending Andrews University. Check with the above listed coordinator for the required course work. The Pre-LLU/RC student may then apply and transfer to LLU through its selective admissions process as a second-year student in their program.

## ALLIED HEALTH

Halenz Hall, Room 326  
(269) 471-3336  
[cls@andrews.edu](mailto:cls@andrews.edu)  
<http://www.andrews.edu/ALHE>

### Faculty

Marcia A. Kilsby, *Chair, CLS Program Director*  
Albert W. McMullen  
Melphine M. Ponniah  
Richard D. Show, *Graduate Program Coordinator*

Academic Programs	Credits
BS in Clinical Laboratory Science (BSCLS)	127
BS: Allied Health Administration	65
MS in Clinical Laboratory Science (MSCLS)	32
Biomedical	
Business and Management	
Computer Information Science	
Education	

The Department of Allied Health prepares students who are committed to preserving and protecting the dignity of life and death. They promote values and attitudes consistent with the Seventh-day Adventist Christian lifestyle. They strive to instill in students a life-long personal quest for individual growth and fulfillment and for continual excellence in health-care practice.

### Clinical Laboratory Science (Medical Technology)

The degree program includes three years of undergraduate (pre-clinical) studies plus one year (3 semesters) of clinical (professional) education.

**Pre-clinical Program.** The first three years of undergraduate study include General Education, cognate science, and pre-clinical 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 a clinical practicum 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.

**Clinical Year Admission Requirements.** An independent admissions process is required for university students who wish to enter clinical studies. Application forms may be obtained from the Department of Allied Health office. Students should complete these applications and return them to the departmental office by