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## COLLEGE OF ARTS & SCIENCES

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### Mission

To empower students for academic, professional and service excellence in the liberal arts and sciences with distinctive Seventh-day Adventist perspective and purpose.

### Pre-Professional Programs

Although essentially a liberal arts college, the College of Arts & 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. See p. 318 for additional pre-professional programs.

### 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: [www.adha.org](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  
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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](http://www.aads.jhu.edu) and the American Dental Association [www.ada.org](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  
 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

### Law

Brent Geraty, *Coordinator*  
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 Buller Hall, Room 135

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

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 Marcia A. Kilsby: 269-471-6294  
 David N. Mbungu: 269-471-6399  
 Marlene N. Murray: 269-471-6243  
 D. David Nowack: 269-471-6065  
 Rob Zdor: 269-471-6696  
 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: [www.aamc.org](http://www.aamc.org) and the American Association of Colleges of Osteopathic Medicine: [www.aacom.org](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—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.

### 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.

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

**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: [www.aoanet.org](http://www.aoanet.org) and the Association of Schools and Colleges of Optometry: [www.opted.org](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  
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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: [www.aacp.org](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  
Introduction to Psychology or Principles of Sociology—3  
Elementary Statistics (STAT340 or 285)—3  
General Microbiology—4  
Organic Chemistry—8  
Calculus (MATH191)—4  
Macroeconomics—3  
Cultural Enrichment (one at 200-level)—9

**Physician Assistant**

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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](http://www.aapa.org).

**Public History**

John J. Markovic, *Coordinator*  
269-471-3511  
Buller Hall, Room 135

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 & 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: [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.

## BEHAVIORAL NEUROSCIENCE

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### Faculty

Karl Bailey, *Director*, Psychology  
Gordon Atkins, Advisor, Biology  
Harvey Burnett, Psychology  
Tom Goodwin, Biology  
James Hayward, Biology  
Herbert Helm, Advisor, Psychology  
Shandelle Henson, Advisor, Mathematics  
David Mbungu, Advisor, Biology  
Duane McBride, Advisor, Behavioral Sciences  
Robert Moore, Mathematics  
Melissa Ponce-Rodas, Advisor, Psychology

Academic Programs	Credits
BS: Biology	
Neuroscience emphasis	67–69
Behavior/Mathematics emphasis	69–72
BS: Psychology	
Behavioral Neuroscience emphasis	68–70

### Mission

As a program at a Seventh-day Adventist University, the behavioral neuroscience program aims to help students integrate their study of the mind and brain into their faith development and Christian walk by encouraging the careful study of, and faithful response to, their area of study and scholarship as both Christians and developing scholars.

Behavioral Neuroscience is an interdisciplinary program at Andrews University that is based in the Departments of Behavioral Sciences, Biology and Mathematics. Its purpose is to provide opportunities for undergraduates to prepare for exciting careers in the fascinating, rapidly growing scientific fields which involve the study of the brain and its control of behavior. In addition to helping students learn basic information about neurobiology, cognitive neuroscience, behavioral neuroscience, and mathematical modeling, the Behavioral Neuroscience program involves students in hands-on, laboratory experiences, using research-quality equipment, and prepares students to not only learn from their field of study but to actively contribute to that field as well. Indeed, research with a faculty mentor is an integral part of the program, with the goal of student presentation and publication of research in professional venues. The interdisciplinary nature of Behavioral Neuroscience is reflected in a common core of classes taken by all students, whether they are majoring in Psychology, Biology or Mathematics, and in the flexibility afforded by each of the three emphases within the program for interdisciplinary study and original research.

As an interdisciplinary program that exists across three departments, the Behavioral Neurosciences Program also aims to develop and reflect a spirit of collaboration and integration on the campus, as exemplified in the interdisciplinary interests and work of faculty and students.