

## **Programs for Pre-Dentistry, Pre-Medicine, Pre-Optometry, Pre-Physical Therapy, Pre-Veterinary, Pre-Pharmacy**

Below is the pre-admission course work typically required for acceptance into the various professional schools. Students interested in one of these areas must confer with an advisor for their area of interest. The two most common being Biology or Chemistry. Admission to one of these professional schools almost always requires a four year degree, therefore your advisor should be a faculty member in the area in which you will major.

### **Pre-Dental Hygiene**

Most HSU pre-dental hygiene students apply to and enter the University of Arkansas for Medical Sciences. The course requirements for application to this school are given below. Other dental hygiene associate programs could have additional or different requirements.

8 hrs Biology	Introduction to Biology or Zoology and Microbiology with labs
4 hrs Chemistry	General Chemistry
3 hrs Math	College Algebra
3 hrs Computer Science	Introduction to Computer Science
6 hrs English	English A and English B
3 hrs history	U.S. History to 1877 or U.S. History since 1877 or American National Government
3 hrs speech	Oral Communication
3 hrs Psychology	Gen. Psychology
3 hrs Sociology	Introduction to Sociology

### **Pre-Dentistry**

Most HSU pre-dental students apply to and attend the University of Tennessee's College of Dentistry. The course requirements for application to this school are given below. Other dental schools could have additional or different requirements.

8 hrs Biology	General Zoology and General Botany with labs
20 hrs Chemistry	Univ. Chemistry I & II, Organic Chemistry I & II, and Biochemistry with labs
6 hrs English	English A and English B
8 hrs Physics	Gen. Physics I & II or Univ. Physics I & II with labs
4 hrs	Other biology: Histology, Microbiology, or Comparative Anatomy with labs

Recommended electives include Genetics, Comparative Anatomy, Developmental Biology, Cell Biology, Histology, Microbiology, Molecular Biology, Physiology, and Neurobiology.

### **Pre-Medical**

Most HSU pre-medical students apply to and attend the University of Arkansas for Medical Science School of Medicine. The course requirements for application to this school are given below. Other medical schools could have additional or different requirements.

12 Hrs Biology	Zoology, Botany, and Genetics with Labs
16 Hrs Chemistry	University Chemistry I & II and Organic Chemistry I & II With Labs
3 Hrs Biochemistry	Biochemistry I
8 Hrs Physics	Gen. Physics I & II or Univ. Physics I & II with Labs
3 Hrs Statistics	MTH 3163, STA 2323, PSY 2143, Or SOC 3103
6 Hrs English	English A and English B
6 Hrs Social Science	Psychology & Sociology are strongly recommended

Strongly recommended courses are in the areas of BIOLOGY: embryology, histology, cellular and molecular biology. PHYSICS and MATH: computer science. BEHAVIORAL SCIENCE: sociology, physical or cultural anthropology, human ecology, general and special psychology. HUMANITIES: facility in understanding written and spoken English is fundamental to precise communication.

### **Pre-Optometry**

Most HSU pre-optometry students apply to and attend the Southern College of Optometry. The course requirements for application to this school are given below. Other optometry schools could have additional or different requirements.

12 hrs biology	General Zoology, General Botany and Microbiology with labs
20 hrs Chemistry	Univ. Chemistry I & II, Organic Chemistry I & II, and Biochemistry with labs
6 hrs English	English A and English B
8 hrs Physics	Gen. Physics I & II or Univ. Physics I & II with labs
8 hrs Math	Calculus I and Statistics
3 hrs Psychology	General Psychology
6 hrs Social Science	Sociology, Psychology, History, Political Science, Philosophy, Geography, etc.

### **Pre-Physical Therapy**

Most HSU pre-physical therapy students apply to and enter the physical therapy program at the University of Central Arkansas. The course requirements for application to this school are given below. Other physical therapy programs could have additional or different requirements.

22 hrs Biology	Human Anatomy and Physiology I & II, Animal Histology, and Cell Biology with labs; two upper division animal-based courses
8 hrs Chemistry	Univ. Chemistry I & II or Gen. Chemistry and Gen. Organic & Biochemistry with labs
8 hrs Physics	Gen. Physics I & II with labs
6 hrs Psychology	Gen. Psychology and one elective
3 hrs Statistics	Statistics or Experimental Statistics or Statistical Methods
1 hr Med Terminology	Medical Terminology

### **Pre-Veterinary**

Most HSU pre-veterinary students apply to and attend the Louisiana State University's School of Veterinary Medicine. The course requirements for application to this school are given below. Other veterinary schools could have additional or different requirements.

12 hrs Biology	General Zoology, General Botany and Microbiology with labs
20 hrs Chemistry	Univ. Chemistry I & II, Organic Chemistry I & II, and Biochemistry with labs
6 hrs English	English A and English B
8 hrs Physics	Gen. Physics I & II or Univ. Physics I & II with labs
6 hrs Math	College Algebra or Pre-Calculus, and Trigonometry
3 hrs Speech	Oral Communications

Additional Biology and Chemistry electives are recommended for all pre-professional students. The number and names of the elective biology and chemistry courses depend upon the student's major. Most students who choose one of these professions are either biology or chemistry majors. It would be best for a student to seek advice from the department in which they intend to major.

### **Pre-Pharmacy**

Below are the courses required for acceptance into the College of Pharmacy at the University of Arkansas for Medical Sciences.

#### **Core Courses**

4 hrs Math	MTH 1294 Calculus I
16 hrs Chemistry	CHM 1014/CHM 1024 University Chemistry I & II and labs CHM 3063/CHM 3051 Organic Chemistry I and lab and CHM 3073/CHM 3131 Organic Chemistry II and lab
12 hrs Biology	BIO 2114 General Zoology and lab BIO 2014 General Botany and lab BIO 3094 Microbiology and lab

4 hrs physics            PHY 2034 General Physics I and lab

**Non-core Courses**

9 hrs English            ENG 1463/ENG 1473 Freshman English A & B  
**Or** Honors English and a higher English course

3 hrs Communication    COM 2013 Oral Communications

3 hrs Business            ECO 2013 Microeconomics

**Or** ECO 2023 Macroeconomics **Or** ACC 2013 Principles of Accounting

9 hrs recommend Electives:

CHM 2084 Quantitative Analysis

MTH 2044 Calculus II

MTH 2323 Statistical Methods

PHY 2044 General Physics II and lab

ENG 2133 Rhetoric and Argument

BIO 3314 Animal Physiology

BIO 3054 Genetics and lab

BIO 4214 Cell Biology and lab

CHM 4283/4381 Biochemistry I and lab

The courses listed above for pre-pharmacy fulfill the requirements for the University of Arkansas for Medical Sciences. A total of 69 hours are required. Humanities electives (humanities, literature, social sciences, history) are taken to complete the required 69 hours. Other requirements in mathematics must be met prior to taking Calculus I. Consult with a pre-pharmacy advisor for options and curriculum requirements for other pharmacy schools. The Biology and Chemistry department and the UAMS Pharmacy School recommend that students earn their four year degree before entering pharmacy school. Acceptance into a professional school is not guaranteed therefore it is wise to work toward a four year degree as you take these courses.