

OGDEN COLLEGE OF SCIENCE AND ENGINEERING

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Mission

The mission of Ogden College of Science and Engineering is to **empower** individuals to become leaders through academic achievement, global **connections**, and engagement in research, education and **service**.

Vision

Ogden College of Science and Engineering is a community of creative and critical thinkers achieving local to global impact.

Ogden College of Science and Engineering encompasses the applied and basic sciences, offering a broad range of degree programs in agriculture, biology, chemistry, computer science, construction management, engineering, geography, geology, architectural science, advanced manufacturing, mathematics, meteorology, physics, astronomy, and psychology.

We are recognized by the high quality and success of our students and graduates, which results from personal attention to student professional development through engagement with faculty in projects that expand on classroom instruction.

Students and faculty at WKU have benefited from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 114 colleges and universities and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowships, scholarships, and research appointments; and to organize research alliances among its members. Programs cover a wide variety of disciplines including earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science and engineering related disciplines.

For more information about ORAU and its programs, contact: Dr. Cathleen Webb, Associate Dean of OCSE and the ORAU counselor for WKU.

Ogden College is home to the Health Professions Advisement Center (HPAC). WKU has an outstanding track record of students gaining entry to the health professions. At HPAC, students interested in attending a school or college of medicine, dentistry, pharmacy, physical therapy, occupational therapy, optometry, veterinary medicine, chiropractic

medicine, podiatry or physician assistant, will receive information, advice and guidance on their preparation for admission to professional school.

In collaboration with the College of Education, Ogden College offers the SKyTeach Program for those interested in teaching science and math at middle or high school levels. This program is a replication of a nationally recognized program in teacher preparation developed at the University of Texas - Austin. WKU received \$2.4 million in funding from Exxon/Mobil through the National Mathematics and Science Initiative to develop the SKyTeach program at WKU.

Those interested in more detailed information regarding programs offered by departments of the College should follow the links listed under departments or email the Dean of Ogden College of Science and Engineering directly.

- Biochemistry, Bachelor of Science (519) (<http://catalog.wku.edu/undergraduate/science-engineering/biochemistry-bs/>)
- Department of Agriculture and Food Science (<http://catalog.wku.edu/undergraduate/science-engineering/agriculture/>)
 - Agriculture, Bachelor of Science (508) (<http://catalog.wku.edu/undergraduate/science-engineering/agriculture/agriculture-bs/>)
 - Agriculture, Minor (308) (<http://catalog.wku.edu/undergraduate/science-engineering/agriculture/agriculture-minor/>)
 - Floristry, Certificate (1769) (<http://catalog.wku.edu/undergraduate/science-engineering/agriculture/floristry-certificate/>)
 - Floristry, Minor (369) (<http://catalog.wku.edu/undergraduate/science-engineering/agriculture/floristry-minor/>)
- Department of Biology (<http://catalog.wku.edu/undergraduate/science-engineering/biology/>)
 - Biology, Bachelor of Science (525) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/biology-bs/>)
 - Biology, Bachelor of Science (617) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/biology-bs-617/>)
 - Biology, Minor (326) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/biology-minor/>)
 - Medical Laboratory Science, Bachelor of Science (5004) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/medical-laboratory-science-bs/>)
 - Molecular Biotechnology, Bachelor of Science (738) (<http://catalog.wku.edu/undergraduate/science-engineering/biology/molecular-biotechnology-bs/>)
- Department of Chemistry (<http://catalog.wku.edu/undergraduate/science-engineering/chemistry/>)
 - Chemistry, Bachelor of Science (623) (<http://catalog.wku.edu/undergraduate/science-engineering/chemistry/chemistry-bs/>)
 - Chemistry, Minor (335) (<http://catalog.wku.edu/undergraduate/science-engineering/chemistry/chemistry-minor/>)
- Department of Earth, Environmental, and Atmospheric Sciences (<http://catalog.wku.edu/undergraduate/science-engineering/geography-geology/>)
 - Environmental, Sustainability, and Geographic Studies, Bachelor of Science (5009) (http://catalog.wku.edu/undergraduate/science-engineering/geography-geology/environmental_sustainability_geographic_studies/)
 - Geographic Information Systems, Certificate (174) (<http://catalog.wku.edu/undergraduate/science-engineering/geography-geology/geographic-information-systems-certificate/>)

- Geological Sciences, Bachelor of Science (5008) (<http://catalog.wku.edu/undergraduate/science-engineering/geography-geology/geology-bs/>)
- Meteorology, Bachelor of Science (578) (<http://catalog.wku.edu/undergraduate/science-engineering/geography-geology/meteorology-bs/>)
- Department of Mathematics (<http://catalog.wku.edu/undergraduate/science-engineering/mathematics/>)
 - Applied Statistics, Minor (313) (<http://catalog.wku.edu/undergraduate/science-engineering/mathematics/applied-statistics-minor/>)
 - Mathematical Economics, Bachelor of Science (731P, 731) (<http://catalog.wku.edu/undergraduate/business/economics/mathematical-economics-bs/>)
 - Mathematics, Bachelor of Arts (528P, 528) (<http://catalog.wku.edu/undergraduate/science-engineering/mathematics/mathematics-ba-528/>)
 - Mathematics, Bachelor of Arts (728P, 728) (<http://catalog.wku.edu/undergraduate/science-engineering/mathematics/mathematics-ba/>)
 - Mathematics, Minor (Minor for Employment in Industry and/or Graduate Studies in Mathematics) (417) (<http://catalog.wku.edu/undergraduate/science-engineering/mathematics/mathematics-minor-employment-industry-graduate-studies/>)
 - Middle Grades Mathematics, Bachelor of Science (730P, 730) (<http://catalog.wku.edu/undergraduate/science-engineering/mathematics/middle-grades-mathematics-bs/>)
- Department of Physics and Astronomy (<http://catalog.wku.edu/undergraduate/science-engineering/physics-astronomy/>)
 - Astronomy, Minor (318) (<http://catalog.wku.edu/undergraduate/science-engineering/physics-astronomy/astronomy-minor/>)
 - Biophysics, Minor (329) (<http://catalog.wku.edu/undergraduate/science-engineering/physics-astronomy/biophysics-minor/>)
 - Physics, Bachelor of Science (754) (<http://catalog.wku.edu/undergraduate/science-engineering/physics-astronomy/physics-bs/>)
- Department of Psychological Sciences (<http://catalog.wku.edu/undergraduate/science-engineering/psychological-sciences/>)
 - Neuroscience, Minor (434) (<http://catalog.wku.edu/undergraduate/science-engineering/psychological-sciences/neuroscience-minor/>)
 - Psychological Science, Bachelor of Science (747E, 747) (<http://catalog.wku.edu/undergraduate/science-engineering/psychological-sciences/psychological-sciences-bs/>)
 - Psychological Science, Minor (440) (<http://catalog.wku.edu/undergraduate/science-engineering/psychological-sciences/psychological-science-minor/>)
- Interdisciplinary Programs (<http://catalog.wku.edu/undergraduate/science-engineering/interdisciplinary-programs/>)
 - Emergency Management Disaster Science, Certificate (1748) (<http://catalog.wku.edu/undergraduate/science-engineering/interdisciplinary-programs/emergency-mgt-disaster-science/>)
- School of Engineering and Applied Sciences (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/>)
 - Architectural Science, Bachelor of Science (518) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/architectural-science-bs/>)
 - Civil Engineering, Bachelor of Science (534P, 534) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/civil-engineering-bs/>)
 - Computer Information Technology, Bachelor of Science (555P, 555) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/computer-information-technology-bs/>)
 - Computer Science, Bachelor of Science (629P, 629) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/computer-science-bs/>)
 - Computer Science, Minor (341) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/computer-science-minor/>)
 - Construction Management, Bachelor of Science (533) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/construction-management-bs/>)
 - Electrical Engineering, Bachelor of Science (537P, 537) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/electrical-engineering-bs/>)
 - Engineering Technology Management, Bachelor of Science (5007) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/technology-management-bs/>)
 - Floodplain Management, Certificate (1763) (Pending Board of Regents Suspension for Fall 2023) (http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/floodplain_management-certificate/)
 - Land Surveying, Certificate (1700) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/land-surveying-certificate/>)
 - Manufacturing Engineering Technology, Bachelor of Science (5006) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/manufacturing-engineering-technology-bs/>)
 - Mechanical Engineering, Bachelor of Science (543P, 543) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/mechanical-engineering-bs/>)
 - Systems Engineering, Minor (476) (<http://catalog.wku.edu/undergraduate/science-engineering/engineering-applied-sciences/systems-engineering-minor/>)
- SKyTeach (<http://catalog.wku.edu/undergraduate/science-engineering/skyteach/>)
 - Middle School Science, Bachelor of Science (734) (<http://catalog.wku.edu/undergraduate/science-engineering/skyteach/middle-school-science-bs/>)

Degrees

- Biochemistry, Bachelor of Science (519) (<http://catalog.wku.edu/undergraduate/science-engineering/biochemistry-bs/>)
- Middle School Science, Bachelor of Science (734) (<http://catalog.wku.edu/undergraduate/science-engineering/skyteach/middle-school-science-bs/>)

Certificates

- Emergency Management Disaster Science, Certificate (1748) (<http://catalog.wku.edu/undergraduate/science-engineering/interdisciplinary-programs/emergency-mgt-disaster-science/>)

- Brewing and Distilling Arts & Sciences, Certificate (1733) (<http://catalog.wku.edu/undergraduate/arts-letters/interdisciplinary-programs/brewing-distilling-arts-sciences-certificate/>)

Pre-Dentistry Advisement

Advisors: Noah Ashley, Eric Conte, Steve Huskey, Les Pesterfield, Ajay Srivastava

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Students planning a career in dentistry should follow the pre-dentistry curriculum at WKU. All applicants to dental school must take the Dental Admission Test (DAT) approximately one year prior to intended matriculation. Most schools of dentistry have a requirement for observation/ shadowing a practitioner. Students should plan on completing their hours of required observation by the end of the junior year.

Code	Title	Hours
ENG 100	Introduction to College Writing	3
ENG 300	Writing in the Disciplines	3
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
BIOL 122 & BIOL 123	Biological Concepts: Evolution, Diversity, and Ecology and Biological Concepts: Evolution, Diversity, and Ecology Lab	4
BIOL 226 & BIOL 227	Microbial Biology and Diversity and Microbial Biology and Diversity Lab	4
BIOL 446 or CHEM 446	Biochemistry I Biochemistry I	3
CHEM 120 & CHEM 121	College Chemistry I and College Chemistry I Laboratory	5
CHEM 222 & CHEM 223	College Chemistry II and College Chemistry II Laboratory	5
CHEM 340 & CHEM 341	Organic Chemistry I and Organic Chemistry Laboratory I	5
CHEM 342 & CHEM 343	Organic Chemistry II and Organic Chemistry II Laboratory	5
MATH 116	College Algebra	3
MATH 117	Trigonometry	3
PHYS 231 & PHYS 232	Introduction to Physics and Biophysics I and Laboratory for Physics and Biophysics I	4
Total Hours		51

It is highly recommended that students planning a dental career complete the entire four-year curriculum and receive the baccalaureate degree before entering a dental college. A few dental schools will accept students after three years of undergraduate work. One year of

satisfactory work in dental school can then be transferred to WKU in order to receive the Bachelor of Science degree. All requirements for the Colonnade Program and the core courses for a major and minor must be completed before leaving WKU. Courses taken in dental school may then (at the discretion of the department chair) be accepted by the major and/or minor departments at WKU allowing the student to receive the bachelor's degree.

Please note: Recommended courses are based on WKU's assessment of specific professional school requirements. Students should, in consultation with their advisor, review the requirements at the professional schools of their choice.

Pre-Forestry Advisement

Advisor: Dr. Martin Stone

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Students interested in forestry as a career may enter Western Kentucky University and complete a plan of study comparable to the first two years of a four-year forestry degree program. The program outlined is designed to qualify students to transfer into the forestry program at the University of Kentucky. This program will permit students with grades of "C" or better to transfer to the degree program of Bachelor of Science in Forestry without loss of credits. Students desiring to attend schools other than the University of Kentucky should contact the pre-forestry advisor for specific requirements.

Code	Title	Hours
Select one of the following groups:		10
CHEM 105 & CHEM 106 & CHEM 107 & CHEM 108	Fundamentals of General Chemistry and Fundamentals of General Chemistry Laboratory and Fundamentals of Organic Chemistry and Fundamentals of Organic Chemistry Laboratory	
CHEM 120 & CHEM 121 & CHEM 222 & CHEM 223	College Chemistry I and College Chemistry I Laboratory and College Chemistry II and College Chemistry II Laboratory	
ENG 100	Introduction to College Writing	3
ENG 300	Writing in the Disciplines	3
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
BIOL 222 & BIOL 223	Plant Biology and Diversity and Plant Biology and Diversity Lab	4
BIOL 348	Plant Taxonomy	4
PHYS 101	Concepts of Motion	3
MATH 116	College Algebra	3
MATH 117	Trigonometry	3
MATH 119	Fundamentals of Calculus	4
COMM 145	Fundamentals of Public Speaking and Communication	3
AGRO 110	Introduction to Plant Science	3

AGRO 350	Soils	3
SFTY 171	Safety and First Aid	1
SPAN 101	Elementary Spanish I	3
GEOG 210	Environment and Ecological Policy	3
CE 160 & CE 161	Principles of Surveying and Principles of Surveying Lab	4
AGEC 360	Agricultural Economics	3
AGRI 291	Introduction to Data Analysis and Interpretation	3
Restricted electives		
Total Hours		67

Please note: Recommended courses are based on WKU's assessment of specific professional school requirements. Students should, in consultation with their advisor, review the requirements at the professional school of their choice.

Pre-Medicine Advisement

Advisors: Kevin Williams, Steve Huskey, Les Pesterfield, Simran Banga, Ajay Srivastava, Ali Er

Contact: Amy Kandler

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The pre-medicine curriculum has been developed with two objectives in mind. The first objective is to provide the undergraduate student with an academic background that will enable them to succeed in the medical school of their choice. The second objective is to provide the academic credits to earn the Bachelor of Science degree after four years of study. It is required that students planning a medical career complete the four-year curriculum and receive the Bachelor of Science degree before entering a medical college.

During the first two years of undergraduate work, the pre-medicine student should complete the majority of the basic science courses that constitute the minimal prerequisites for entrance into medical school.

Code	Title	Hours
ENG 100	Introduction to College Writing	3
ENG 300	Writing in the Disciplines	3
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
BIOL 122 & BIOL 123	Biological Concepts: Evolution, Diversity, and Ecology and Biological Concepts: Evolution, Diversity, and Ecology Lab	4
BIOL 224 & BIOL 225	Animal Biology and Diversity and Animal Biology and Diversity Lab	4
BIOL 446 or CHEM 446	Biochemistry I Biochemistry I	3
CHEM 120 & CHEM 121	College Chemistry I and College Chemistry I Laboratory	5

CHEM 222 & CHEM 223	College Chemistry II and College Chemistry II Laboratory	5
CHEM 340 & CHEM 341	Organic Chemistry I and Organic Chemistry Laboratory I	5
CHEM 342 & CHEM 343	Organic Chemistry II and Organic Chemistry II Laboratory	5
MATH 116	College Algebra	3
MATH 117	Trigonometry	3
MATH 136	Calculus I	4
Select one of the following groups:		8-10
PHYS 231 & PHYS 232 & PHYS 332 & PHYS 233	Introduction to Physics and Biophysics I and Laboratory for Physics and Biophysics I and Introduction to Physics and Biophysics II and Laboratory for Physics and Biophysics II	
PHYS 255 & PHYS 256 & PHYS 265 & PHYS 266	University Physics I and University Physics I Lab and University Physics II and University Physics II Laboratory	
Total Hours		59-61

In addition to the basic science courses, classes should be taken from the WKU Colonnade requirements. In preparation for the MCAT, it is strongly recommended that the pre-medical student choose BIOL 319, BIOL 330 and BIOL 382 or MATH 183 as electives. PSY 100 / PSYS 100 or PSYS 350 and SOCL 100 are also recommended among Colonnade classes.

During the junior and senior years, students with direction from their pre-medicine advisor, should complete courses to constitute a major and a minor in addition to completing the Colonnade Program requirements for a degree. All applicants to medical school must take the Medical College Admission Test (MCAT).

In 2018, in partnership with The Medical Center of Bowling Green and WKU, the University of Kentucky, School of Medicine opened a branch medical campus in Bowling Green, KY. Pre-medical students have the opportunity to complete pre-medical studies and all four years of medical school in Bowling Green.

Please note: Recommended courses are based on WKU's assessment of specific professional school requirements. Students should, in consultation with their advisor, review the requirements at the professional schools of their choice.

Pre-Occupational Therapy Advisement

Advisors: Wendi Hulsey, Mark Schafer, Matthew Shake

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Occupational therapists and occupational therapy assistants help people across the lifespan participate in the things they want and need to do through the therapeutic use of everyday activities (occupations).

Common occupational therapy interventions include helping children with disabilities to participate fully in school and social situations, helping people recovering from injury to regain skills, and providing supports for older adults experiencing physical and cognitive changes.

Students may fulfill pre-occupational therapy requirements at Western Kentucky University and become eligible to submit applications for admission to any doctoral or master's level occupational therapy schools within the United States. These schools vary slightly in their requirements so students should decide after 4 or 5 semesters on the college(s) of occupational therapy to which they plan to submit an application for admission and arrange their schedules in accordance with the requirements of that particular school. Students applying to Occupational Therapy school should take the GRE.

Code	Title	Hours
Courses typically required		
BIOL 131	Human Anatomy and Physiology	4
BIOL 231	Advanced Human Anatomy and Physiology	4
MATH 183 or BIOL 382	Introductory Statistics Introductory Biostatistics	3
PSY/PSYS 100	Introduction to Psychology	3
PSY/PSYS 440	Abnormal Psychology	3
SOCL 100	Introductory Sociology	3
AH 290	Medical Terminology	2
Courses often required		
PSY/PSYS 220	Introduction to Lifespan Developmental Psychology	3
CHEM 109	Chemistry for the Health Sciences	4
PHYS 231 & PHYS 232	Introduction to Physics and Biophysics I and Laboratory for Physics and Biophysics I	4

Please note: Recommended courses are based on WKU's Assessment of specific professional school requirements. Students should, in consultation with their advisor, review the requirements at the professional school of their choice.

Pre-Optometry Advisement

Advisors: Ali Er, Les Pesterfield

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Students may fulfill pre-optometry requirements at Western Kentucky University and become eligible to submit applications for admission to any of the 23 optometry schools within the United States. These schools vary slightly in their pre-optometry requirements. Students should decide after 4 or 5 semesters on the college(s) of optometry to which they plan to submit an application for admission and arrange their schedules in accordance with the requirements of that particular school.

The professional optometric program requires four years of study in a school of optometry. This is in addition to the three or more years of pre-

optometry requirements. Applicants to all of the optometry schools are required to take the Optometry Admission Test (OAT).

In the fall of 2016, the Kentucky College of Optometry (Pikeville, KY) welcomed their inaugural class. Through a Memorandum of Agreement between WKU and KYCO, qualified WKU students will have preferred admission status at KYCO.

The courses listed below are required as prerequisites for all optometry schools. Each science course must be accompanied by its appropriate laboratory.

Code	Title	Hours
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
BIOL 122 & BIOL 123	Biological Concepts: Evolution, Diversity, and Ecology and Biological Concepts: Evolution, Diversity, and Ecology Lab	4
BIOL 226 & BIOL 227	Microbial Biology and Diversity and Microbial Biology and Diversity Lab	4
CHEM 120 & CHEM 121	College Chemistry I and College Chemistry I Laboratory	5
CHEM 222 & CHEM 223	College Chemistry II and College Chemistry II Laboratory	5
CHEM 340 & CHEM 341	Organic Chemistry I and Organic Chemistry Laboratory I	5
PHYS 231 & PHYS 232	Introduction to Physics and Biophysics I and Laboratory for Physics and Biophysics I	4
PHYS 332 & PHYS 233	Introduction to Physics and Biophysics II and Laboratory for Physics and Biophysics II	4
MATH 116	College Algebra	3
MATH 117	Trigonometry	3
MATH 136	Calculus I	4
ENG 100	Introduction to College Writing	3
ENG 300	Writing in the Disciplines	3
PSY/PSYS 100	Introduction to Psychology	3
MATH 183	Introductory Statistics	3
Total Hours		57

There may be additional course requirements that vary with each optometry school.

All students in the curriculum are strongly encouraged to work toward a bachelor's degree, even though a degree is not required for admission to most optometry schools. One year of satisfactory work in optometry school can generally then be transferred to WKU in order to receive the Bachelor of Science degree. All requirements for the Colonnade Program and the core courses for a major and minor must be completed. Courses taken in optometry school may then (at the discretion of the department chair) be accepted by the major and/or minor department at WKU allowing the student to receive the bachelor's degree.

Please note: Recommended courses are based on WKU's assessment of specific professional school requirements. Students should, in consultation with their advisor, review the requirements at the professional school of their choice.

Pre-Pharmacy Advisement

Advisors: Jeremy Maddox, Rodney King, Carnetta Skipworth

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Students planning a career in pharmacy should follow a pre-pharmacy curriculum at WKU. After completion of a minimum of 70 credit hours, the student may take the Pharmacy College Admissions Test (PCAT) and apply for admission to a school of pharmacy for the remaining four years of training.

The following curriculum contains courses required for admission to the University of Kentucky, College of Pharmacy. The courses required by other schools of pharmacy are much the same; however, the student should investigate the requirements of the school to which they plan to attend in order that every requirement may be included in their pre-pharmacy program.

Code	Title	Hours
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
BIOL 131	Human Anatomy and Physiology	4
BIOL 231	Advanced Human Anatomy and Physiology	4
Select one of the following:		4
BIOL 207 & BIOL 208	General Microbiology and General Microbiology Laboratory	
BIOL 226 & BIOL 227	Microbial Biology and Diversity and Microbial Biology and Diversity Lab	
CHEM 120 & CHEM 121	College Chemistry I and College Chemistry I Laboratory	5
CHEM 222 & CHEM 223	College Chemistry II and College Chemistry II Laboratory	5
CHEM 340 & CHEM 341	Organic Chemistry I and Organic Chemistry Laboratory I	5
CHEM 342 & CHEM 343	Organic Chemistry II and Organic Chemistry II Laboratory	5
ENG 100	Introduction to College Writing	3
ENG 300	Writing in the Disciplines	3
ECON 202 or ECON 203	Principles of Economics (Micro) Principles of Economics (Macro)	3
MATH 136	Calculus I	4
MATH 183 or BIOL 382	Introductory Statistics Introductory Biostatistics	3

COMM 145	Fundamentals of Public Speaking and Communication	3
Total Hours		55

Note: Many pharmacy schools require a single semester of Physics that can be met by taking PHYS 231/PHYS 232 or PHYS 255.

The Carpenter-Dent Trust Fund offers scholarships to eligible pre-pharmacy students who are residents of Allen, Simpson or Warren County.

Please note: Recommended courses are based on WKU's assessment of specific professional school requirements. Students should, in consultation with their advisor, review the requirements at the professional school of their choice.

Pre-Physical Therapy Advisement

Advisors: Steve Huskey, Gary English, Mark Schafer, Wendi Hulsey

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The pre-physical therapy program at Western Kentucky University is designed to prepare students for application to accredited programs in physical therapy. It is recommended that the student complete a baccalaureate degree while completing the pre-requisite requirements of the physical therapy schools to which they plan to apply. It should be noted that all physical therapy schools have adopted a Doctorate/Ph.D. level program, and as a result, a baccalaureate degree is required. Completion of the following prerequisites does not guarantee admission into a physical therapy school; it merely places the candidate into a competitive pool of applicants from which the successful candidates will be selected and interviewed.

Application to the physical therapy schools at WKU, the University of Kentucky and Bellarmine University requires applicants to have earned a bachelor's degree by the time they enter the program. A grade of "C" or better is required in all prerequisite courses. Applicants must also show evidence of having completed at least 50 hours of physical therapy observation and/or volunteer experience at two or more health care facilities. The following suggestions and requirements must be completed by the time the successful applicant enters the professional program:

Code	Title	Hours
PSY/PSYS 100	Introduction to Psychology	3
PSY/PSYS 220	Introduction to Lifespan Developmental Psychology	3
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
BIOL 122 & BIOL 123	Biological Concepts: Evolution, Diversity, and Ecology and Biological Concepts: Evolution, Diversity, and Ecology Lab	4
BIOL 131	Human Anatomy and Physiology	4
BIOL 231	Advanced Human Anatomy and Physiology	4

CHEM 120 & CHEM 121	College Chemistry I and College Chemistry I Laboratory	5
CHEM 222 & CHEM 223	College Chemistry II and College Chemistry II Laboratory	5
PHYS 231 & PHYS 232	Introduction to Physics and Biophysics I and Laboratory for Physics and Biophysics I	4
PHYS 332 & PHYS 233	Introduction to Physics and Biophysics II and Laboratory for Physics and Biophysics II	4
MATH 116	College Algebra	3
MATH 117	Trigonometry	3
Select one of the following:		3
BIOL 382 or PH 383 or MATH 183	Introductory Biostatistics Biostatistics in the Health Sciences Introductory Statistics	
Additional Suggestion		
AH 290	Medical Terminology (required by UK)	2
PHIL 320 or PHIL 322	Ethics Biomedical Ethics	3
Total Hours		54

If not completed in Colonnade, Six (6) hours of social/behavioral sciences (psychology, sociology, anthropology, philosophy, ethics, etc.) are also required.

The GRE is also required and should be completed approximately a year in advance of intended matriculation to PT school. It is also strongly recommended that professional certification in first aid by the American Red Cross and in CPR by the American Heart Association be completed prior to entrance into the program. The community CPR course offered by the American Red Cross is NOT acceptable. The minimum overall GPA should be 2.75; the minimum science core GPA should be 3.0 (4.0 scale). However, the competitive nature of the application process over the last several years indicates that overall and science GPA's should both be 3.4 or higher to seriously contend for entrance.

WKU graduated their inaugural DPT class in Spring 2016; for more information go to <http://www.wku.edu/physicaltherapy> (<http://www.wku.edu/physicaltherapy/>).

Please note: Recommended courses are based on WKU's assessment of specific professional school requirements. Students should, in consultation with their advisor, review the requirements at the professional school of their choice.

Pre-Physician Assistant Advisement

Advisors: Kerrie McDaniel

Contact: Dr. Les Pesterfield

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A Physician Assistant (PA) is a healthcare provider that has earned a Master's Degree from an accredited PA school (typically earned in 27

months) and passes a national licensure exam (PANCE). They must practice under the supervision of a licensed physician. It is a relatively new health profession, which has grown tremendously over the last 20 years. There are currently 209 accredited PA Programs in the US (but only 3 in KY, University of Kentucky, University of the Cumberlands, and Sullivan University). The successful candidate will have earned a bachelor's degree prior to matriculation, completed the pre-requisite coursework, take the Graduate Record Exam (GRE) as well as complete extensive shadowing and healthcare work experience (1000 hours, 500 at time of application). Due to the extensive health care experience required, students are encouraged to begin no later than the beginning of the junior year. The following pre-requisites are based on those at the University of Kentucky. The student should carefully examine the requirements at other schools to which they plan to apply.

Code	Title	Hours
ENG 100	Introduction to College Writing	3
ENG 300	Writing in the Disciplines	3
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
BIOL 122 & BIOL 123	Biological Concepts: Evolution, Diversity, and Ecology and Biological Concepts: Evolution, Diversity, and Ecology Lab	4
Select one of the following:		4
BIOL 226 & BIOL 227	Microbial Biology and Diversity and Microbial Biology and Diversity Lab	
BIOL 207 & BIOL 208	General Microbiology and General Microbiology Laboratory	
BIOL 131 & BIOL 231	Human Anatomy and Physiology and Advanced Human Anatomy and Physiology	8
CHEM 120 & CHEM 121	College Chemistry I and College Chemistry I Laboratory	5
CHEM 222 & CHEM 223	College Chemistry II and College Chemistry II Laboratory	5
CHEM 340 & CHEM 341	Organic Chemistry I and Organic Chemistry Laboratory I	5
MATH 116	College Algebra	3
MATH 117	Trigonometry	3
PSYS/PSY 100	Introduction to Psychology	3
PSYS/PSY 220	Introduction to Lifespan Developmental Psychology	3
SOCL 100	Introductory Sociology	3
BIOL 382 or MATH 183	Introductory Biostatistics Introductory Statistics	3
AH 290	Medical Terminology	2
Total Hours		61

Pre-Veterinary Medicine Advisement

Advisors: Paul Woosley, Mike Stokes, Steve Huskey

Contact: Dr. Paul Woosley

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Kentucky students have the opportunity to attend veterinary medical school at reduced tuition at Auburn University, Auburn, AL or Tuskegee Institute, Tuskegee, AL. The Commonwealth of Kentucky has made this possible through its participation with the Southern Regional Education Board (SREB). The State of Kentucky pays approximately \$25,000 annually for each student at Auburn or Tuskegee. Each year the School of Veterinary Medicine at Auburn reserves 34-40 positions for students from Kentucky who meet admission requirements. If admitted, Kentucky students pay the same fees as Alabama residents. Two to six positions may also be available each year at Tuskegee Institute on the same basis.

The minimum education requirement for admission to the School of Veterinary Medicine, Auburn University, is the satisfactory completion of an approved curriculum at an accredited college or university. A minimum grade point average of 2.50 is required overall and for the required courses.

Students may apply to one or both institutions as they near completion of the pre-veterinary requirements. The GRE is required for both Auburn University and Tuskegee.

The following courses have been approved by Auburn University:

Code	Title	Hours
ENG 100	Introduction to College Writing	3
ENG 200	Introduction to Literature	3
ENG 300	Writing in the Disciplines	3
MATH 116	College Algebra	3
MATH 117	Trigonometry (or higher level)	3
HIST 101 or HIST 102	World History I World History II	3
CHEM 120 & CHEM 121	College Chemistry I and College Chemistry I Laboratory	5
CHEM 222 & CHEM 223	College Chemistry II and College Chemistry II Laboratory	5
CHEM 340 & CHEM 341	Organic Chemistry I and Organic Chemistry Laboratory I	5
CHEM 342 & CHEM 343	Organic Chemistry II and Organic Chemistry II Laboratory	5
PHYS 231 & PHYS 232	Introduction to Physics and Biophysics I and Laboratory for Physics and Biophysics I	4
BIOL 120 & BIOL 121	Biological Concepts: Cells Metabolism and Genetics and Biological Concepts: Cells, Metabolism, and Genetics Lab	4
BIOL 122 & BIOL 123	Biological Concepts: Evolution, Diversity, and Ecology and Biological Concepts: Evolution, Diversity, and Ecology Lab	4
ANSC 140 & ANSC 141	Introduction to Animal Science and Introduction to Animal Science Laboratory	4
BIOL/CHEM 446	Biochemistry I	3

Select one of the following:		3
ART 100	Art Appreciation	
DANC 110	Dance Appreciation	
MUS 120	Music Appreciation	
THEA 151	Theatre Appreciation	
COMM 145	Fundamentals of Public Speaking and Communication	3
SOCL 100 or AGRI 108	Introductory Sociology Rural Sociology	3
PSY/PSYS 100 or ECON 150	Introduction to Psychology Introduction to Economics	3
Select 6 hours of 300-400 level science electives		6
ANSC 321	Comparative Anatomy	
ANSC 345	Principles of Animal Nutrition	
ANSC 437 & ANSC 438	Physiology of Reproduction in Domestic Animals and Physiology of Reproduction in Domestic Animal Laboratory	
BIOL 207 & BIOL 208	General Microbiology and General Microbiology Laboratory	
BIOL 319	Introduction to Molecular and Cell Biology	
BIOL 327	Genetics	
BIOL 328	Immunology	
BIOL 330	Animal Physiology	
BIOL 411	Cell Biology	
PHYS 332 & PHYS 233	Introduction to Physics and Biophysics II and Laboratory for Physics and Biophysics II	
Total Hours		75

This curriculum is planned for completion in three years. By choosing the correct electives in the pre-veterinary program and transferring credits for the first year of veterinary school to Western Kentucky University, students may receive the Bachelor of Science degree from WKU. This is a suggested curriculum; the sequence of courses may be varied to suit individual situations. Every effort is made to advise each student based upon the individual's background and academic capability.

Please note: Recommended courses are based on WKU's assessment of specific professional school requirements. Students should, in consultation with their advisor, review the requirements at the professional school of their choice.