

# Pre-Professional Engineering, and Health and Science Tracks

- Students intending to prepare for any of the health and science tracks (**Chiropractic, Dentistry, Engineering, Medicine, Occupational Therapy, Pharmacy, Physical Therapy, Physician Assistant, and Veterinary Medicine**) should follow the course of study covering their respective pre-professional requirements as stated in the catalogs of the institutions in which they plan to enroll. In addition to their major advisor, students will have a science faculty member assigned to help guide and counsel students who intend to prepare for entrance into these professional tracks. **Dual degree programs allow the student to earn a degree at Newberry College while completing the degree at the other institution. Dual-degree programs are available in Engineering with Clemson University, Forestry with Duke University, Chiropractic with Sherman College, and Pharmacy with Presbyterian College. Students will have an assigned faculty to assist the student with these programs.**
- The science and math faculty assigned for each professional track are as follows:

Science and Math Faculty	Professional Track
Associate Professor of Mathematics Naser Al-Hasan, Ph.D.	Engineering Dual Degree Program with Clemson University
Professor of Biology Charles Horn, Ph.D.	Veterinary Medicine, Forestry Dual Degree Program with Duke University
TBD	Physical Therapy, Physician's Assistant
Assistant Professor of Biology Lindsay Boateng, Ph.D.	Chiropractic, Chiropractic Dual Degree Program with Sherman College
Associate Professor of Biology Valarie Burnett, Ph.D.	Medical, Dentistry
Assistant Professor of Chemistry Peter Foster, Ph.D.	Pharmacy, Pharmacy Dual Degree Program with Presbyterian College
Associate Professor Steve Lambert ,Ph.D.	Occupational Therapy

## Pre-Engineering Track:

Students seeking the pre-engineering track major in Applied Mathematics at Newberry College. Students seeking a 3/2 pre-engineering with Clemson must take a minimum of 30 hours, which includes:

- 30 hours of Mathematics (MAT): 211, 212, 213, 225, 227, 261, 334, 433, and 443; CHE 113 and PHY 213 are also recommended; plus general education core courses.

## Health and Science Tracks:

Students may major in any area as long as the necessary coursework for entrance into the professional school has been completed. Many students on a professional health track choose biology or chemistry as their major due to the quantity of required coursework in these areas. Students should find out the necessary course **requirements** through websites from the professional schools in which they are interested in applying. The appropriate science faculty advisor will help each student develop an individual plan for completion of necessary coursework. The science faculty have four-year templates for each pre-professional track. Of importance for candidates to all professional health track is the completion of several volunteer, internship, or job shadowing experiences within the area of intended study. These show the professional schools that candidates are serious about their chosen future career path and have an understanding of their intended profession. Further, applicants are expected to have excellent oral and written communication skills.

The recent trends in admission to **Medical** schools have been to reduce the number of courses required for admission. However, the standardized test, the Medical College Admission test (MCAT) is a criteria by which admission is granted. The MCAT underwent major changes during 2015. Scores reflect a student's ability in four areas: biological and biochemical foundations of living systems; chemical and physical foundations of living systems; psychological, social, and biological foundations of behavior, and critical analysis and reasoning

skills. Additional biochemistry and psychology content is now on the MCAT. For additional information on the MCAT content please see the following link: <https://www.aamc.org>. Scores on the MCAT will be greatly enhanced by completion of appropriate courses prior to taking the MCAT during the summer before the senior year.

**Dental** school admission requirements include the Dental Admission Test (DAT). For more information on DAT content see the following link: <http://www.ada.org/en/education-careers/dental-admission-test/>. Scores on the DAT will be greatly enhanced by completion of appropriate courses prior to taking the DAT during the summer before the senior year.

**Veterinary Medical** school admission requirements include the Graduate Record Exam (GRE) (for GRE information, see the following link: <http://www.ets.org/gre/>) South Carolina does not have a veterinary school; hence South Carolina residents must attend an out-of-state veterinary school. However, students may be considered in-state residents for tuition purposes at the University of Georgia, Tuskegee University (Alabama) and Mississippi State University.

The **Pre-pharmacy** track prepares students for application to the clinical doctorate program in Pharmacy (PharmD). **Pharmacy school admission requirements include the Pharmacy College Admission Test (PCAT).** For additional information, see the following link: <https://www.pcatweb.info/> Currently, South Carolina has four graduate programs in Pharmacy: Presbyterian College, Medical School of South Carolina, South University, and University of South Carolina at Columbia. Newberry College has a Dual-Degree agreement with the Presbyterian College School of Pharmacy that can allow for acceptance into their program after three years at Newberry College.

The health professions tracks of **Occupational Therapy** and **Physical Therapy** both require the Graduate Record Exam (GRE). For more information on the GRE, see the following link: <http://www.ets.org/gre/>. Most **Physician Assistant** programs require at least two years of college courses in basic science and behavioral science as prerequisites. Students interested in **Chiropractic** tracks must have completed 90 semester hours of coursework to be accepted with no required graduate exam. Newberry College has a Dual-Degree agreement with the Sherman College of Chiropractic that can allow for acceptance into their Doctor of Chiropractic program after three years at Newberry College.

Any student interested in any of the above health sciences and also in doing research in these fields is invited to join the Future Medical Professional Association (FMPA). This student organization will offer many opportunities to do volunteer projects, apply for internships, get helpful tips for applications and interviews, overall networking, and also have fun. This organization is advised by Dr. Valarie Burnett. Career Services makes available practice entrance exams for students to take multiple times prior to taking the actual exam.

Additionally, Newberry College pre-professional advisory board, pre-professional advisors and mentors, along with career services will guide pre-professional students through undergraduate preparation for graduate school.