

# BIOMEDICAL SCIENCE (BMS)

## **BMS-505 Foundations of Medicine 1 (7 credits)**

This course provides an advanced level of basic science to gain solid basic biomedical knowledge. This course focuses on anatomy and anatomical sciences including, embryology, physiology, biochemistry, genetics, and pathology. This course prepares students for any biomedical research or patient care.

## **BMS-515 Foundation of Medicine Lab 1 (2 credits)**

This course provides an immersive exploration of human anatomy and histology through various laboratory experiences designed to enhance theoretical and practical understanding. Students will use various anatomical tools, including clay and plastic models, cutting-edge Anatomage tables, and human prosections.

## **BMS-522 General Medicine (1.5 credits)**

This course provides students with a comprehensive introduction to key concepts in medicine, focusing on the terminology, history, diagnosis, and management of common medical disorders to apply foundational knowledge gained in the BMS 505 course to clinical scenarios and clinical practice of medicine.

## **BMS-524 Primary Care (1.5 credits)**

This course provides an in-depth introduction to the principles, scope, and significance of primary care with holistic patient focus in healthcare delivery. It is designed to provide students with a comprehensive understanding of the patient-centered, longitudinal, and integrative nature of primary care across the lifespan with a focus on chronic and common diseases.

## **BMS-526 Social and Community Medicine (1 credits)**

This course provides a comprehensive exploration of the factors that influence health at the community and societal levels. The students will gain knowledge of health disparities, health systems, and policies, preventative health measures, and social and community health concepts.

## **BMS-528 Foundational Science Discussions 1 (1 credits)**

This course provides an interactive and integrative learning experience through a series of lectures and small-group discussions, to apply foundational knowledge and topics discussed in BMS 505 and focus on research design, methodology, biostatistical analysis, and statistical interpretation in health-related real-world scenarios.

Corequisite(s): Take BMS-505

## **BMS-540 Learning Consolidation 1 (1 credits)**

This course is designed to integrate key elements of medicine, emphasizing the development and mastery of core competencies essential for the medical field. Students will use their knowledge developed across interleaved subjects, ensuring long-term comprehension and application of medical principles, in real-world patient care, including examination, diagnosis, treatment, and prevention

## **BMS-551 Foundation of Medicine 11 (5 credits)**

This course provides an advanced level of basic science to gain solid basic biomedical knowledge. This course is a team-taught course mainly focusing on neuroanatomy, neuroscience, microbiology, pharmacology, and pathology. This course prepares students for any biomedical research or patient care.

Prerequisite(s): Take BMS-505

## **BMS-565 Foundation of Medicine Lab 11 (1.5 credits)**

This course offers a comprehensive, hands-on experience in neuroanatomy, microbiology, and pathology, combining traditional dissection and microscopy with digital tools to enhance understanding. This course is designed to provide students with the practical skills and theoretical knowledge necessary to excel in advanced health sciences, integrating multiple disciplines.

Corequisite(s): Take BMS-551

## **BMS-575 Caring and Patient-Centered Professional and Social Medicine (1.5 credits)**

This course provides essential clinical skills needed for medical practice, with a focus on basic clinical procedures, physical exams, professionalism, interpersonal, communication skills, and patient-centered care, rural medicine, and collaboration with other healthcare professionals.

Prerequisite(s): Take BMS-526

## **BMS-591 Foundational Science Discussion 11 (1 credits)**

This course provides an in-depth exploration of epidemiological principles and their application in public health and clinical decision-making. Students will gain a comprehensive understanding of both descriptive and analytic epidemiology, including the calculation and interpretation of key epidemiologic measures such as ratios, proportions, incidence rates, mortality rates, and prevalence.

Prerequisite(s): Take BMS-528

Corequisite(s): Take BMS-551

## **BMS-595 Learning Consolidation 11 (1 credits)**

This course is a continuation of BMS540 and builds on the same elements with new diseases and cases to emphasize the development and mastery of core competencies essential for the medical field. Students will use their knowledge developed across interleaved subjects, ensuring long-term comprehension and application of medical principles, in real-world patient care, including examination, diagnosis, treatment, and prevention.

Prerequisite(s): Take BMS-540

## **BMS-599 Capstone Research (1-5 credits)**

This course is designed to be a capstone experience in the form of an independent research experience, internship/practical experience, or service-learning experience. Through this course, the student will combine knowledge and skills learned in the coursework of the program into an integrated project that will conclude in an advanced paper and presentation of the student's work. The course emphasizes critical thinking, research ethics, and the application of theoretical frameworks to address real-world issues.