

# Biomedical Sciences (BIMD)

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## **BIMD 202. Introduction to Medical Microbiology Lecture. 3 Credits.**

An introductory medical microbiology course that provides a background in all aspects of microbial agents and disease including cell biology, impact on human health, and public health approaches to microbial disease. Three hours of lecture per week. Prerequisite: CHEM 116 or CHEM 121 with a grade of C or higher. F,S,SS.

## **BIMD 202L. Introduction to Medical Microbiology Laboratory. 2 Credits.**

An introductory laboratory course in the isolation and identification of all types of microorganisms with an emphasis on those that cause disease. Four hours laboratory per week. Prerequisite: CHEM 116 or 121 with a grade of C or higher. Corequisite: BIMD 202. F,S,SS.

## **BIMD 220. Human Anatomy & Physiology I. 3 Credits.**

BIMD 220 (3 credits) and BIMD 221 (3 credits) together are a complete survey of the anatomy and physiology of the major human organ systems and the foundational concepts required to understand them. BIMD 220 covers beginner material on introductory AP, cells, and tissues, as well as advancing through the skin, skeletal, muscle and nervous organ systems. BIMD 221 is a more advanced study of the endocrine, lymphatic, cardiovascular, respiratory, digestive, urinary, and reproductive systems. Each concept is presented through the lens of a diverse human population and both BIMD 220 and 221 are validated as essential studies special emphasis courses covering "The Diversity of Human Experience" topic. Together the courses are designed to meet field standards using the HAPS learning outcomes and goals. Corequisite: Either BIOL 150 and BIOL 150L or CHEM 116 and CHEM 116L or CHEM 121 and CHEM 121L. F,S.

## **BIMD 220L. Human Anatomy & Physiology I Lab. 1 Credit.**

Laboratory exploration of human anatomy and physiology through virtual physiology experiments, dissections, human cadaver viewings, and evaluations of self. Accompanies BIMD 220. Corequisite: BIMD 220. F.

## **BIMD 221. Human Anatomy & Physiology II. 3 Credits.**

BIMD 220 (3 credits) and BIMD 221 (3 credits) together are a complete survey of the anatomy and physiology of the major human organ systems and the foundational concepts required to understand them. BIMD 220 covers beginner material on introductory AP, cells, and tissues, as well as advancing through the skin, skeletal, muscle and nervous organ systems. BIMD 221 is a more advanced study of the endocrine, lymphatic, cardiovascular, respiratory, digestive, urinary, and reproductive systems. Each concept is presented through the lens of a diverse human population and both BIMD 220 and 221 are validated as essential studies special emphasis courses covering "The Diversity of Human Experience" topic. Together the courses are designed to meet field standards using the HAPS learning outcomes and goals. Prerequisite: BIMD 220. F,S.

## **BIMD 221L. Human Anatomy & Physiology II Lab. 1 Credit.**

Laboratory exploration of human anatomy and physiology through virtual physiology experiments, dissections, human cadaver viewings, and evaluations of self. Accompanies BIMD 221. Corequisite: BIMD 221.

## **BIMD 301. Biochemistry. 3 Credits.**

Introductory exploration of major concepts in biochemistry. The four main knowledge themes are macromolecular structure and function, energy transformation, metabolic regulation and integration, and information flow. Students will practice skills in molecular visualization, critical thinking, and working in small groups. Prerequisite: CHEM 340 or CHEM 341 with a grade of C or better. Corequisite: BIOL 150 and CHEM 342 are recommended. S.

## **BIMD 302. General Microbiology Lecture. 2 Credits.**

An introduction to general microbiology with emphasis on the morphology, classification, and physiology of bacteria, fungi, parasites, and viruses. The significance of microorganisms in consumer product production, waste disposal, the environment, and interaction with humans is discussed. Two hours of lecture per week. Prerequisite: BIOL 150 and CHEM 116 or CHEM 121, with a grade of C or better in both prerequisite courses. S.

## **BIMD 302L. General Microbiology Laboratory. 2 Credits.**

An introductory laboratory course in the growth, isolation, and identification of microorganisms from a variety of sources using procedures such as staining, microscopy, culturing, and biochemical tests. Scientific inquiry is promoted through authentic problems faced in microbial fields. Four hours laboratory per week. Corequisite: BIMD 302. S.

## **BIMD 328. Introduction to Immunology. 3 Credits.**

An introduction to the fundamentals of immunology including innate immunity, humoral and cellular response, hypersensitivity, immunodeficiency, immunogenetics, tolerance, and immunodiagnostics. Three hours of lecture per week. Prerequisite: BIOL 150 and BIOL 315 or BIMD 301 with a grade of C or better. F.

## **BIMD 401. Advanced Biochemistry. 3 Credits.**

Serves as a bridge to career paths that would benefit from a deeper grounding in the molecular and cellular life sciences. Students will apply core concepts in biochemistry as they explore primary literature in biochemistry and molecular biology. Students will practice skills working in small groups, including critical reading of peer-reviewed research, interpretation of biochemical and molecular biological data, and using diverse databases and other online tools. Prerequisite: BIMD 301 with a grade of C or better. F.

## **BIMD 492. Peer Teaching and Tutoring in Biomedical Sciences. 1-4 Credits.**

A course designed to provide individual students with the opportunity to peer teach and/or tutor for classes in the department of Biomedical Sciences. This experience will occur under the direction of a departmental faculty member. Experiences will have variation dependent on the class the student is assisting with. Open to all students with consent of the faculty member. Repeatable to 12.00 credits. S/U grading. F,S,SS.

## **BIMD 494. Directed Studies. 1-4 Credits.**

A course designed to provide individual students with the opportunity for creative, scholarly and research activities in Biomedical Sciences under the direction of a departmental faculty member. Repeatable to 12.00 credits.