CELLULAR BIOLOGY/NEUROBIOLOGY/ANATOMY (CBNA)

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CBNA 301  Struct of the Human Body (6 Credit Hours)
The student develops a knowledge and understanding of the basic concepts and facts of human gross anatomy as it relates to function and clinical problems. Lectures, clinical case-based and problem-based learning, computer-aided instructional materials, and student dissection.

CBNA 305  Medical Neuroscience (5 Credit Hours)
The student gains a fundamental knowledge of gross and microscopic structure of the human nervous system. This also includes the organs of special sense. Integrated into this structural base are the major physiological, pharmacological, and neurological aspects of the nervous system. Laboratory sessions permit individual study of the structure of the human brain and spinal cord.

CBNA 405  Neuroscience (3 Credit Hours)
The student gains a fundamental knowledge of gross and microscopic structure of the human nervous system. This also includes the organs of special sense. Integrated into this structural base are the major physiological, pharmacological, and neurological aspects of the nervous system. Laboratory sessions permit individual study of the structure of the human brain and spinal cord.

CBNA 415  Developmental Biology (3 Credit Hours)
The focus of this course is on the cellular mechanisms of differentiation, chiefly in vertebrate system. Topics include factors involved in commitment and induction, differential gene expression, role of growth factors, extracellular matrix, and cell-cell interactions.

CBNA 421  Cellular Biology (3 Credit Hours)
A course that provides knowledge of the structure and function of cells, including the experimental foundations of cell and molecular biology (this course is the same as the BMSC 312 in the Core Curriculum).

CBNA 425  Basic Ultrastructure (3 Credit Hours)
An introduction to the fundamentals of electron microscopy and to the ultrastructural basis of the cells and tissues of the body. The aims of the course to learn: (a) the basic operation of the electron microscope and auxiliary equipment; (b) specimen preparation techniques; and (c) and recognize the ultrastructure of cell constituents.

CBNA 431  Advanced Neuroscience (2 Credit Hours)
A multi-disciplinary approach to the study of the nervous system at an advance level, which includes participation by faculty of various basic science and clinical departments. Topics for presentation and discussion are drawn from all aspects of the nervous system structure and function. Special emphasis is placed on recent experimental developments in the field of neuroscience.

CBNA 440  Neuroimmunology (1 Credit Hour)
Advanced reading course providing an overview of the CNS-immune interactions.
Course equivalencies: X-CBNA440/NRSC440

CBNA 441  Signal Transduction (2 Credit Hours)
The study of the basic mechanisms of how hormone, neuroendocrine and growth factor messages are transduced into actions of the cell. Major signal transduction pathways within the cell will be explored (cross reference with Physiology 471)