

# Ohio State Biochemistry Program

## APPROVED ELECTIVE COURSES - SPRING QUARTER

Spring Quarter:	Credits
<u>Biochemistry 708 - Protein and Enzyme Laboratory</u> (FORMERLY OFFERED IN WINTER QUARTER) Purification, characterization, and study of the physical and catalytic properties of enzymes and proteins.	5
<u>Biochemistry 765 - Advanced Biochemistry: Physical Biochemistry</u> Nuclear magnetic resonance, optical spectroscopy, and mass spectroscopy.	3
<u>Biochemistry 775 - Biophysical Chemistry</u> Techniques and principles of physical biochemistry, emphasizing chromatography, electrophoresis, centrifugation, ultra filtration, and circular dichroism.	3
<u>Chemistry 833 - Advanced Organic Chemistry III</u> An advanced course in the fundamental principles of chemistry covering a survey of heterocyclic compounds, carbohydrates, proteins, and enzymes.	3
<u>Chemistry 990 - Seminar on Topics in Biochemistry</u> Advanced topics in the biological aspects of chemistry.	3
<u>Food Science and Technology 830 - Advanced Studies in Nutrition</u> 830.01 Energy/Lipids 830.02 Vitamins/Minerals	3
<u>Molecular and Cellular Biochemistry 824 - Enzymology</u> Selected topics in structure/function relationships, mechanisms of catalysis, kinetics, and metabolic interrelations of enzyme systems.	3
<u>Molecular Virology, Immunology and Medical Genetics 754- Fundamentals of Molecular Virology</u> This course will emphasize the molecular mechanisms by which animal and human viruses replicate with emphasis on interactions of viruses with single cells.	3
<u>Microbiology 750 - Fermentation Biotechnology</u> Fundamentals of modern fermentation technology and industrial microbiology; with emphasis on product formation, culturing techniques and computer-controlled fermentation.	5
<u>Microbiology 760 - Advanced Bacterial Physiology</u> Specialized metabolic pathways, regulation and control mechanisms, and bacterial biochemistry.	3
<u>Microbiology 832 - Advanced Cellular Immunology</u> Studies of immunity at the cellular level with emphasis on the induction and effector roles of macrophages and lymphocytes.	3
<u>Molecular Genetics 715 - Developmental Genetics</u> A study of the regulation of developmentally significant genes and cellular interactions involved in differentiation and pattern formation in Drosophila and metazoans.	3
<u>Molecular Genetics 733 - Human Genetics</u> The principles of human genetics covering mapping of disease genes, defects causing human disease, the cloning of disease genes, gene therapy and transgenes.	3
<u>Molecular Genetics 770 - Molecular Biology of Animals and Plant Viruses</u> An advanced virology course using selected animal and plant viruses as models of eukaryotic gene regulation.	3
<u>Neuroscience Graduate Studies Program 800 - Molecular Neurobiology</u> Survey of recent advances in the understanding of the structure and function of molecules known to be of key importance in the nervous system.	2