



ART732 Topics in Contemporary Art

3 Credits

An examination of the major trends in the visual arts and art criticism from 1950 to the present. Media discussed includes painting, sculpture, photography, architecture, and new genres. Art works will be studied in their cultural, social, and political contexts. Course requirements include frequent visits to Boston area galleries and museums at students' expense.

ART736 The Arts in America From 1492 to 1900

3 Credits

A study of American visual culture from the colonial period to 1900. Media examined include painting, sculpture, prints, photographs, architecture, and the decorative arts. Emphasis on the historical diversity of artistic practices derived from European, Native American, African American and Asian traditions. Frequent visits to museums and historic houses in Salem and Boston. Museum visits at students' expense.

ART746 Advanced Portrait Photography

3 Credits

Prerequisite: Evidence of both basic and intermediate photographic course work completed, or satisfactory portfolio review

This graduate course builds upon students' previous knowledge and approaches to black and white and color photography. The course explores photography of the human form under both natural and artificial lighting, culminating in a thematic portfolio of finished work. Four scheduled studio hours plus five open studio hours per week.

ART749 Advanced Digital Photography

3 Credits

Prerequisite: Evidence of both basic and intermediate photographic course work completed, or satisfactory portfolio review.

This graduate course builds upon students' previous knowledge of the technical and aesthetic aspects of digital photography, including both the digital acquisition and manipulation of images, using both camera and computer. Four scheduled studio hours plus five open studio hours per week.

ART750 Cultural Diversity in Artistic Expression

3 Credits

The Institute explores different outlooks and forms of communication reflected in art of diverse cultures. It relates the visual arts to music, dance, language and other creative expressions. Ideas presented are applied to educational activities, studio arts and art historical research; students elect projects in one of these areas. Particularly recommended for teachers.

ART875, 876 Directed Study

Arranged

An independent research project supervised by a member of the Art Faculty.

Biology

BIO700 Research Methods in Teaching Science

3 Credits

This course will enable the student to select and implement appropriate methodologies for conducting research in the teaching of science and to report the results of such research. It will also include methods of investigation and techniques for interpreting the appropriate professional literature. Three lecture/discussion hours per week and occasional field trips.

**BIO705 Topics in Aquaculture****3 Credits**

Prerequisites: Two upper level undergraduate courses in biology or permission of Department Chairperson

The course provides an overview of aquaculture with emphasis on applications in New England. Fundamental concepts as well as new developments are examined. Participants gain the skills needed to setup and operate a small, recirculating aquaculture system as a living laboratory in their classroom or to grow fish for personal consumption or supplemental income.

BIO706 Estuarine Ecology**4 Credits**

Prerequisites: Two upper level undergraduate courses in biology or permission of Department Chairperson

This course provides an overview of estuarine environments, where freshwater meets saltwater. Interactions between the physical, chemical and biological components of an estuarine environment are explored and illustrated by field experiences. Participants gain a hands-on appreciation of the dynamic nature and ecological importance of estuarine environments. Emphasis is on methods for data collection and investigations appropriate for the classroom. This intensive 50-hour course may include field time outside of scheduled hours.

BIO708 Entomology**4 Credits**

An advanced course investigating the morphology, physiology, ecology, evolution, taxonomy, and systematics of insects. Methods of collecting, preserving, and identifying insects are introduced. Required are preparation of small insect collection and research project; laboratory work and field trips will also be required. Three lecture hours and one three-hour laboratory.

BIO711 Computer Applications for the Science Teacher**4 Credits**

Prerequisites: BA or BS in a Natural Science. Enrollment limited to matriculated students in the Master of Arts in Teaching Biology program. Others by permission of the Department Chairperson.

This course provides an introduction to selected computer applications that can be utilized by science teachers in teaching and administrative practice. Emphasis will be placed on the use of telecommunications and multimedia applications in the teaching of science. Students will explore other software and hardware technologies to develop a foundation of how to use computer technology in teaching science. Four lecture hours.

BIO716 Parasitology**4 Credits**

Prerequisite: BIO310, or permission of the Department Chairperson

An introduction to the study of the protozoan and helminth parasites. The laboratory will involve identification of prepared slides of parasitic types and also collecting and staining parasites from marine and freshwater hosts.

BIO730 Advanced Cell Biology**3 Credits**

Prerequisite: BA or BS in Biology or permission of the Department Chairperson

An advanced course to allow students to investigate cellular structure, functions, and interactions. Cytological analysis of cells including advanced microscopy will be emphasized. Biochemical, molecular, and genetic approaches will also be discussed in detail. The students will design and complete a research project. Some lab work will be required.



BIO740 Neurophysiology

4 Credits

Prerequisites: One year of Biology and one year of Chemistry, or permission of the Department Chairperson

The study of the vertebrate nervous system with emphasis on physiological mechanisms in man. Topical areas include: generation, propagation, and transmission of bio-electricity; reflex facilitation and inhibition; the ascending and descending pathways; coordination of motion; the autonomic nervous system; special senses; and neuroendocrine mechanisms.

BIO741 Endocrinology

4 Credits

Prerequisites: One year of Biology and one year of Chemistry, or permission of the Department Chairperson

The study of the endocrine glands and their hormones with particular emphasis on mechanisms of hormone action. Topics include normal and abnormal physiology of the endocrine glands, methods of hormone analysis and endocrine control of such phenomena as growth, water and electrolyte balance, sexual differentiation and cellular metabolism.

BIO760 Immunology

4 Credits

Prerequisites: Anatomy and Physiology II and Organic Chemistry II, or permission of Department Chairperson

An introduction to the structural and functional organization of the immune system and to the interplay of innate and adaptive factors underlying immunity. The relationship between immune responses and diseases will also be examined.

BIO800 Field Botany

4 Credits

Prerequisites: BA or BS in Biology with at least one course in Botany. Others by permission of the Department Chairperson

A taxonomic study of the local flora with much laboratory and field work. Identification of plants through the use of keys, understanding of phylogenetic arrangements of flowering plants, and herbarium methods will be emphasized.

BIO801N Workshop in Field Biology

3 Credits

Prerequisite: One year of College Biology

A study of terrestrial and/or aquatic environments and the organisms inhabiting them at selected locations. The focus may include local habitats, other regions in the United States and selected foreign areas.

BIO875, BIO876 Directed Study

3 Credits

An independent research project supervised by a member of the Biology Faculty.

Business Administration

ACC703 Financial and Managerial Accounting

3 Credits

This course presents the basic concepts and principles of external financial reporting, as well as the nature of management accounting. Topics to be covered include generally accepted accounting principles, financial statement preparation and analysis, cost concepts, budgeting and product pricing.