VETERINARY AND BIOMEDICAL SCIENCES (VBSC)

VBSC 503: Critical Elements of Genetics and Molecular and Cellular Biology

4 Credits

Foundational topics and critical analysis in evolution, genetics, molecular and cellular biology, and cell differentiation. Cross-listed with BMMB 503 and MCIBS 503

Cross-listed with: BIOL 503, BMMB 503, MCIBS 503

VBSC 511: Molecular Immunology

2 Credits

The study of molecular and biochemical events that influence immune responses and define current questions in immunology. Cross-listed with BMMB 511 / MCIBS 511 / VBSC 511 Molecular Immunology

Cross-listed with: BIOCH 401 or BIOCH 437

VBSC 514: Prostaglandins and Leukotrienes

3 Credits

Biochemical, physiological, and nutritional aspects of arachidonic acid and related essential fatty acid metabolism. Structure-activity relationships of prostaglandins, prostacyclins, thromboxanes, and leukotrienes.

Cross-listed with: NUTR 514

VBSC 520: Pathobiology

3 Credits

The course deals with the mechanism of disease. Topics are: homeostasis, vascular injury, inflammation, neoplasia, genetic disorders, and biochemical toxicology. Cross-listed with NUTR 514

Cross-listed with: BIOL 413 or BIOL 416 or B M B 400 or B M B 433 or B M B 460

VBSC 534: Current Topics in Cancer Research

3 Credits

A discussion of current cancer research literature with the focus on primary research literature. Cross-listed with: BIOL 413 or BIOL 416 or B M B 400 or B M B 433 or B M B 460

VBSC 535: Oncology: Bench to Bedside

3 Credits

This course is required for graduate students in the MCIBS program who are in the Cancer Biology Emphasis Area. It is designed to give students
who are studying cancer at a molecular, reductive level experience with the clinical aspects of the disease. The course will be held at Mt. Nittany Medical Center once a week for 3 hrs, in both patient-oriented, hands-on and didactic settings to understand how cancer is diagnosed, imaged, and treated, how patient care and side effects of therapy are managed, and the importance of clinical trials in developing new treatments for cancer. For each subject area students will spend 2 hours engaged in a clinical experience related to cancer under the supervision of course directors or additional clinicians at Mt. Nittany, followed by a 1 hour lecture/didactic session on a related topic. In addition to broad learning objectives, this course will make students aware of critical issues in cancer biology and treatment that may serve as a springboard for future research.

**Prerequisite:** MCIBS 503, MCIBS 590, BIOL 416; VBSC 534

VBSC 590: Colloquium

1-3 Credits/Maximum of 3

Continuing seminars which consist of a series of individual lectures by faculty, students, or outside speakers.

VBSC 596: Individual Studies

1-9 Credits/Maximum of 9

Creative projects, including nonthesis research, which are supervised on an individual basis and which fall outside the scope of formal courses.

VBSC 597: Special Topics

1-9 Credits/Maximum of 9

Formal courses given on a topical or special interest subject which may be offered infrequently; several different topics may be taught in one year or semester.

VBSC 597A: **SPECIAL TOPICS**

1-3 Credits

VBSC 597B: **SPECIAL TOPICS**

1-2 Credits

VBSC 597F: **SPECIAL TOPICS**

1 Credits

VBSC 597G: **SPECIAL TOPICS**

1 Credits

VBSC 600: Thesis Research

1-15 Credits/Maximum of 999

No description.

VBSC 601: Ph.D. Dissertation Full-Time

0 Credits/Maximum of 999

No description.