Please note: Each college and department may have their own requirements, in addition to those stated in the Syllabus Guidelines.

PCB 6231 Cancer Biology II – Immunology and Cancer Immunotherapy
Course Prerequisites: N/A
95436 001, Credit Hours 4
College of Arts and Sciences, CMMB

COURSE SYLLABUS

I. Welcome!

II. University Course Description
This course focuses on cancer immunology with an introduction to cancer immunotherapy. The basics of immune development and function in the context of tumor immunology will be presented in lectures and through discussion of relevant current literature. The course will also introduce current general principles of immunotherapy. Topics include:

• Antibody structures
• B Cells
• T Cells
• Antigen Presentation
• Myeloid Cells
• Toll-Like Receptors
• Natural Killer Cells
• Tolerance
• Complement
• Tumor Immunity and the microenvironment
• Immune Suppression

III. Course Purpose
This course provides an understanding of immune system fundamentals and the changes that develop in cancer patients. The course also provides an introduction to cancer immunotherapy principles and current practice.

IV. Course Objectives
The objectives are to develop an in-depth understanding of the development, function and regulation of the immune system with an emphasis on tumor immunology. This course is aimed at graduate students in Cancer Biology, Immunology, or those in related disciplines who wish to obtain an advanced perspective on immunologic knowledge and current research.
V. Student Learning Outcomes
At the conclusion of the course students will demonstrate the ability to discuss in-depth the central immune system components and pathways. Students also will demonstrate the ability to discuss how the presence of cancer alters the immune response at the cellular and tumor microenvironment levels.