Preliminary Syllabus

Course title: Immune Health Basics Online Course  
Course code: BIO 102 W  
Instructor: Tobi L. Schmidt, Ph.D.

Objective: This course is designed to give students unfamiliar with the workings of the human immune system a comprehensive overview of the role it plays in fighting disease and maintaining health. This course will introduce the basic functions of the immune system in human health. Specific functions will be illustrated using the examples of bacterial and viral infections, cancer, and autoimmunity. In addition, environmental and lifestyle influences on immune function will be reviewed.

Grade options and requirements:

No Grade Requested (NGR) – Please participate.

Credit/No Credit – Participate in all discussions and completion of all five quizzes*.

Letter Grade - Participate in all discussions, completion of all five quizzes* along with a short final exam**.

* Missed quizzes may be taken for half credit.  
** Late exams will not be accepted.

Module 1 (Week 1) – Introduction to the Immune System

Purpose: To familiarize students with organization, basic function, and components of the immune system.

✓ Fundamental functions
✓ Structure and Organization
✓ Components and Communication

Module 2 (Week 2) – Immune Function in Infection

Purpose: To illustrate the functions of the immune system in protecting and eliminating the body of microbial infections; an example of non-self immunity.

✓ Infection causing microbes
✓ Cellular response to microbes
Non-cellular response to microbes

Module 3 (Week 3) – Immune Function in Cancer

Purpose: To illustrate the functions of the immune system in recognizing health threats that arise within the body; an example of self-immunity.

✓ Basic biology of cancer
✓ Cellular response to cancer
✓ Non-cellular response to cancer

Module 4 (Week 4) – Immune Function in Autoimmunity

Purpose: To illustrate what happens when the immune system improperly turns against the body; autoimmunity.

✓ Dysregulation of the immune response
✓ Recognition of “self”
✓ Cellular and Non-cellular response “self”

Module 5 (Week 5) – Lifestyle Factors that Influence Immune Function

Purpose: To highlight the major environmental and lifestyle influencing factors on the function of the immune system.

✓ Nutrition and Exercise
✓ The microbiota
✓ Sleep and stress