

**Bryn Mawr College**  
**Summer School 2008**  
**COURSE OFFERINGS**

Courses with less than five students registered by April 16 for Session I and June 10 for Session II are subject to cancellation.

**General Chemistry (Chemistry 103, 104)**

\* General chemistry is only available for incoming postbac students \*

**Session I** (May 27-June 28)

**Chemistry 103** - Topics include the atomic theory of matter; stoichiometry of chemical reaction; properties of gases, liquids and solids; phase changes; the electronic structure of atoms; chemical bonding; introduction to thermodynamics. Laboratory work emphasizes quantitative techniques and the application of principles discussed in the lectures. Labs will be scheduled and will take place the first day of classes.

**Lecture:** Tu, W, F- 9:30-11:00 AM **AND** 12:30-2:30 PM

**Laboratory:** M, Th-8:30-11:30 AM **OR** 11:45 AM-2:45 PM (to be scheduled on first day of classes).

**Session II** (July 7-August 8)

**Chemistry 104** - Topics include equilibria; acid-base chemistry, solubility, chemical kinetics, electrochemistry, introduction to organic reactions, and selected chemistry of the transition metals. Laboratory work emphasizes quantitative techniques and the application of principles discussed in the lectures.

**Lecture:** Tu, W, F- 9:30-11:00 AM **AND** 12:30-2:30 PM

**Laboratory:** M, Th-8:30-11:30 AM **OR** 11:45 AM-2:45 PM (to be scheduled on first day of classes).

**Required textbook:** *Chemistry, A General Chemistry Project of the American Chemical Society*, by Jerry A. Bell, 2004 (Publisher: W. H. Freeman)

**Organic Chemistry (Chemistry 211, 212)**

An introduction to the principles of organic chemistry, including synthetic and spectroscopic techniques.

**Prerequisite:** Chemistry 103-104 or equivalent.

**Session I** (May 27-June 28)

**Chemistry 211**

**Lecture:** M-F 9:15 AM-11:45 AM

**Laboratory:** 12:30 PM-5:00 PM two/three days per week, to be scheduled on the first day of class. Laboratory will begin on the first day of class.

## **Session II (July 7-August 8)**

### **Chemistry 212**

**Lecture:** M-F 9:15 AM- 11:45 AM

**Laboratory:** 12:30 PM-5:00 PM two/three days per week, to be scheduled on the first day of class. Laboratory will begin on the first day of class.

**Required textbooks:** *Organic Chemistry*, 4<sup>th</sup> edition by G. Marc Loudon and *Study Guide and Solutions Manual to accompany Organic Chemistry 4<sup>th</sup> edition* by G. Marc Loudon and Joseph G. Stowell (Oxford University Press). Supplies necessary for lab, such as goggles and gloves, may be purchased in the bookstore.

## **Biochemistry (Biology 354)**

**Biology 354** – This course covers many of the essential topics important to the study and understanding of biochemistry. Topics will include: protein structure & functions, enzymes, lipids and cell membranes, cell signal transduction, metabolism, and application of biochemical principles in the study and treatment of certain human diseases. Students will have the opportunity to prepare and present a written paper or poster dealing with a topic relevant to the course.

**Prerequisite:** One semester of organic chemistry and one year of biology or permission of instructor.

## **Session I (May 27-June 28)**

M, Tu, Th 9:00 AM - noon

**Note:** This is a lecture course; there is no laboratory.

\*For the week of May 27, class will meet on T, W, and Th to make up for the Memorial Day holiday; the remaining weeks class meets on M, T, and TH.

**Required textbook:** *Lehninger Principles of Biochemistry*, 4<sup>th</sup> ed. 2005 by David L. Nelson and Michael M. Cox.

## **Calculus with Analytical Geometry Mathematics 101, 102**

Differentiation and integration of algebraic and elementary transcendental functions, with the necessary elements of analytical geometry and trigonometry; the fundamental theorem of calculus; its role in theory and applications; methods of integration; applications of definite integral; infinite series.

**Prerequisite:** for Math 102 is Math 101 or an equivalent math course. Math 101 and 102 cannot be taken concurrently.

## **Session I (May 27-June 28)**

**Math 101 Section 1** M, T, TH 9:00 AM– noon

**or**

**Section 2** M, T, TH 1:00 AM– 4:00 PM

\*For the week of May 27, class will meet on T, W, and Th to make up for the Memorial Day holiday; the remaining weeks class meets on M, T, and TH.

**Session II (July 7-August 8)**

**Math 101** (repeated) M, T, TH 9:00 AM– noon

**Math 102** M, T, TH 1:00 PM– 4:00 PM