

## **BIOL-UA 22 Molecular and Cell Biology II**

### **Instructors:**

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### **Course Description:**

Welcome to Molecular and Cell Biology II. Our objective is to give you a firm and rigorous foundation in the principles of modern molecular and cellular biology. These concepts form almost all the basis for the great advances now being made in biology and the medical sciences. In this second part of the course, we will discuss the fundamental processes that enable cells to grow, move, and communicate. The processes underlying tissue formation and cell death will also be introduced.

### **Pre-requisite:**

Molecular and Cell Biology I (BIOL-UA 21)

### **Textbook and Required Materials:**

Lodish H, Berk A, Kaiser CA, Krieger M, Bretscher A, Ploegh H, Amon A and Scott MP.  
*Molecular Cell Biology*, either the 7<sup>th</sup> or 8<sup>th</sup> editions are fine. New York: W. H. Freeman and Company

### **Grading:**

Midterm Exam I	25%
Midterm Exam II	25%
Final Exam	30%
Recitation Participation	5%
Recitation Paper	10%
Recitation Presentation	5%

### **Topics:**

Cell physiology and metabolism  
Cell trafficking and movement  
Membrane potential and electrical cell communication  
Biochemical cell communication  
Cell cycle and the fundamentals of cancer