

## BioG 1110 Spring 2010 Syllabus

### INSTRUCTORS

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 (2) Dr. Liz Balko ([eab74@cornell.edu](mailto:eab74@cornell.edu)) [Course Director/ Senior Lecturer]

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 See Blackboard for Course Office Hours

I. **Required Books & Materials** - Available at Campus Store

- **BioG 1110 Spring 2010 Lab Manual** [written specifically for this semester].
- **Personal Response System (PRS) transmitter (iClicker)** [available at Campus Store]

**Lecture Schedule [MWF 9:05-9:55 in Call Auditorium, Kennedy Hall].**

Day	Date	Topic	Lab Schedule
M	1/25	<b>Know Thyself; I Am Alive;</b> What is this precious and fragile thing we call Life? The meaning and value of my life.	<b>Lab 1 A-Week: Photosynthesis &amp; Environmental Changes</b>  Prelab Questions due @ beginning of your lab  In class exercise
W	1/27	<b>I Am A Thinker;</b> What is Science?	
F	1/29	<b>I am A Descendent;</b> What is the origin of life?	
M	2/01	<b>I Am My Cells;</b> The cell is the basic unit of life	<b>Lab 1 B-Week: Photosynthesis &amp; Environmental Changes</b>  Prelab Questions due @ beginning of your lab  In class exercise
W	2/03	<b>I Am What I Eat;</b> Nutrition and the discovery of essential nutrients	
F	2/05	<b>I Am What I Eat;</b> Photosynthesis: How plants make the food we eat	

Day	Date	Topic	Lab Schedule
M	2/08	<b>I Am What I Eat;</b> Digestion; How I process food	<b>Lab 2 A-Week: Examining The Vertebrate Body</b>  Prelab Questions due @ beginning of your lab  Module Comprehension exercise
W	2/10	<b>I Am What I Eat;</b> Absorption; How food enters my living space	
F	2/12	<b>I Am What I Eat and Breathe;</b> Circulation and Respiration; How food and oxygen get to my cells	
M	2/15	<b>I Am What I Eat and Breathe;</b> Cellular Respiration; How I turn food into available energy	<b>Lab 2 B-Week: Examining The Vertebrate Body</b>  Prelab Questions due @ beginning of your lab  Module Comprehension exercise
W	2/17	<b>I Am What I Do Not Eliminate;</b> The excretory system; How waste leaves my body	
F	2/19	<b>I Am Stable;</b> Homeostasis: How I maintain a stable body	
M	2/22	<b>I Get Older;</b> Oxygen, sugar and the degradation of the body	<b>Lab 3 A-Week: Scientific Inquiry to Human Health Issues</b>  Prelab Questions due @ beginning of your lab  In class cardiology exercise
W	2/24	<b>No Lecture today</b>	
F	2/26	<b>PRELIM 1</b>	
M	3/01	<b>I Am What I Do;</b> Movement: Muscles and bones; Muscle movements that allow me to work and play and to express emotions	<b>Lab 3 B-Week: Scientific Inquiry to Human Health Issues</b>  Prelab Questions due @ beginning of your lab  In class cardiology exercise
W	3/03	<b>I Am A Transient Carrier Of The Code Of Life;</b> Reproductive anatomy and physiology	
F	3/05	<b>I Am A Work In Process;</b> Reproduction and development	

Day	Date	Topic	Lab Schedule
M	3/08	<b>I Am A Male And/Or A Female;</b> Hormonal control of development	<b>No Labs This Week</b>
W	3/10	<b>Cell Reproduction. I Am My Genes;</b> The discovery of DNA as the chemical basis of heredity	
F	3/12	<b>I Am My Genes And Gene Products;</b> Gene expression: DNA, RNA and proteins (Transcription and Translation)	
		<b>I Am Able To Artificially Manipulate My Genes;</b> Biotechnology and horizontal gene transfer	
M	3/15	<b>I Am Able To Artificially Manipulate My Genes;</b> The human genome project and personalized medicine	<b>Lab 4 A-Week: Crime Scene Investigation (CSI)</b>  Using DNA & PCR Amplification  Prelab Questions due @ beginning of your lab
W	3/17	<b>HIV and AIDS</b>	
F	3/19	<b>No Lecture</b>	
<b>SPRING RECESS NO LECTURE and NO LABS THIS WEEK MARCH 22-26</b>			
M	3/29	Lecture on <b>What I Did on my Spring Break</b>	<b>Lab 4 B-Week: Crime Scene Investigation (CSI)</b>  Using DNA & PCR Amplification  Prelab Questions due @ beginning of your lab
W	3/31	<b>I Sense and Respond to the Environment;</b> Stimulus-response coupling	
F	4/02	<b>I Sense And Respond To The Environment;</b> The senses	
M	4/05	<b>No Lecture Today-Optional Review Session</b>	<b>Lab 5 A-Week: CSI Part 2: Using Gel Electrophoresis</b>  Prelab Questions due @ beginning of your lab
W	4/07	<b>PRELIM 2</b>	
F	4/09	<b>I Am A Thinker;</b> The Brain	

Day	Date	Topic	Lab Schedule
M	4/12	<b>I Am A Thinker;</b> The electrical nature of thought and action	<b>Lab 5 B-Week: CSI Part 2: Using Gel Electrophoresis</b>  Prelab Questions due @ beginning of your lab  Forensic results & report (due at Lab 6)
W	4/14	<b>I Am a Thinker;</b> The cellular basis of thought and behavior	
F	4/16	<b>I Am a Thinker;</b> The chemical basis of thought and behavior	
M	4/19	<b>I Am My Immune System;</b> Immunology: The discrimination between self and non-self	<b>Lab 6 A-Week: Controversial Issues Surrounding Biotechnology &amp; Society [Debate]</b>  Forensic report due
W	4/21	<b>I Am Not Always Healthy;</b> Disease	
F	4/23	<b>I Am A Member Of A Biological Community;</b> Plants as sources of medicines	
M	4/26	<b>I Am A Member Of A Biological Community;</b> The life of a corn plant—agriculture and the mutual dependence between plants and humans	<b>Lab 6 B-Week: Controversial Issues Surrounding Biotechnology &amp; Society [Debate]</b>  Forensic report due
W	4/28	<b>I Am A Member Of A Biological Community;</b> The coffee plant and the history of the world	
F	4/30	<b>I Am My Cells Redux;</b> Stem Cells, cloning, etc.	
M	5/03	Catch Up and Review and Student Presentations	
W	5/05	Catch Up and Review and Student Presentations	
F	5/07	<b>No Lecture</b>	

**FINAL EXAM – THURSDAY,  
MAY 13, 2010 – 2:00-4:30 PM  
(Location TBD)**

## BioG 1110 Lab Assignment Schedule

<p><b>Lab 1: <i>Photosynthesis &amp; Environmental Changes</i></b></p>	<ul style="list-style-type: none"> <li>➤ <b>Pre Lab Questions (5 pts)*</b></li> <li>➤ <b>Photosynthesis Exercise (15 pts)</b></li> </ul>
<p><b>Lab 2: <i>Examining the Vertebrate Body</i></b></p>	<ul style="list-style-type: none"> <li>➤ <b>Pre Lab Questions (5 pts)*</b></li> <li>➤ Module completion demonstrating practical proficiency of organs &amp; organ systems (15 pts)</li> </ul>
<p><b>Lab 3: <i>Applying Scientific Inquiry to Human Health Issues</i></b></p>	<ul style="list-style-type: none"> <li>➤ <b>Pre Lab Questions (5 pts)*</b></li> <li>➤ Human Health Exercise (15 pts)</li> </ul>
<p><b>Lab 4: <i>Crime Scene Investigation (CSI) Using DNA &amp; PCR Amplification</i></b></p>	<ul style="list-style-type: none"> <li>➤ <b>Pre Lab Questions (5 pts)*</b></li> <li>➤ DNA &amp; PCR Lab Exercise (15 pts)</li> </ul>
<p><i>No Labs Held - Spring Break (March 22 - 26)</i></p>	
<p><b>Lab 5: <i>Crime Scene Investigation (CSI) Continued: Using Gel Electrophoresis</i></b></p>	<ul style="list-style-type: none"> <li>➤ GEL Electrophoresis Lab Exercise (10 pts)</li> <li>➤ CSI Results - due at the beginning of Lab 6 (10 pts)</li> </ul>
<p><b>Lab 6: <i>Controversial Issues Surrounding Biotechnology &amp; Society [Debate]</i></b></p>	<ul style="list-style-type: none"> <li>➤ Biotechnology ppt presentation &amp; Debate (20 pts)</li> </ul>

**\*Pre Lab Questions are posted on the BioG 1110 BLACKBOARD SITE before lab sections meet. Your answers to the Pre Lab questions must be posted on BLACKBOARD before your assigned lab starts.**