

Su. I. 2007

Biology 100
Introduction to the Biological World
Course Syllabus and Outline

Course Title: Intro. to the Biol. World (3 credits, no lab)

Textbook: The Living World, 4th. ed., George B. Johnson, McGraw-Hill

Instructor: James D. Haddock, Ph.D

Teaching Assistant: Heather E. Hicks

e-mail address: haddock@ipfw.edu - emergency only, please

Please use the mail function within the Biol. 100 Website to contact us.

Campus phone: (260) 481-6314

Home phone: (emergency only) (260) 347-3697

Welcome to Biology 100 - Introduction to the Biological World!

This is a survey course that will cover the 5 major areas of biology:

molecular/cellular, genetic, evolution/diversity, physiology, and ecology. It is a 3 credit class without a laboratory. A laboratory is offered separately on campus for those that need it for their particular major, and is one additional credit hour.

An Overview of the Basic Structure of the Course

1. Content - The Content portion includes my lectures that cover each Chapter and are entitled "My Thoughts". The Content of the course is organized into 5 Parts. Each Part is further subdivided into several modules. The "My Thoughts" Lectures, Assignments, Discussions, PDF's, Quizzes, Exams, etc, are grouped under the modules. A further brief explanation follows:

"My Thoughts" - This is my lecture material which is based partially on the text and also my own experience. It contains many visuals from the course text and other sources, plus links to other web sites. You may wish to study the course material directly from the "My Thoughts" section but would have to do so at your computer. The advantage is that you have all the visuals - some of which are not found in the textbook.

PDF's - An alternative to strictly using the graphics version, is to incorporate the PDF's into your studying. The PDF or Printable Document File

version is located below each Chapter in the Table of Contents and is easily downloadable as a black and white printout. It will not have the visuals and that's why it is so easily downloaded on your home computers. Use the PDF version to study the notes independent of the computer. Note that you will need to have the current edition of Acrobat Reader installed on your computer if it is not already there. This software enables you to download various documents.

Study Questions - Study questions over each "lecture" will be periodically sent as an attachment to mail messages.

2. Navigational Tools - Most of these will be found on the **Toolbar** at the top of the Course Homepage. Navigational tools include course mail, discussion, chat, the grade book, course calendar, etc.

Calendar - Quiz and Exam dates as well as due dates for various assignments, readings, etc. are published on the Calendar. Click on the date to see if any additional information has been posted. Make sure that you watch the Calendar for due dates. We suggest that you print a copy, and check it periodically for any updates or changes. **Failure to pay attention to the Calendar will mean that you will lose points because you didn't meet a deadline.**

Class Mail - Use the Class Mail, rather than your instructor's university email, to communicate with us. We will also be using it to send you study questions and for general information as we proceed through the course.

Discussions - For each discussion, each student will be randomly placed in a "discussion room" with several other students. You will be posting and receiving comments on the current topic to/from your group members. Your contribution to a Discussion will be downloaded after the closing date and will be evaluated and graded.

Chat - Chat sessions are voluntary sessions and are the only item in the course that are held in "real" time. The focus of the Chat sessions is simply to answer questions that you may have over the material.

Assessments - Both quizzes and exams are termed "Assessments". Both are timed and must be taken within a 2 day "window of opportunity".

Gradebook - We will be using the Gradebook to keep track of your scores.

We use an Excel spread Sheet as a backup of the data in Vista. Normally, you should be able to view your scores as soon as a quiz or exam is submitted. Look under “My Grades”. Other scores will be posted from time to time so that you can keep track of how you are performing.

Other Questions That You May Have:

What do I do if I have computer problems?

If you are having any technical computer problems that are beyond the scope of the course try calling the IPFW ITS (Information Technology Services) Help Desk at 481-6030 or consult with the person in charge of one of IPFW’s many student computing labs. All IPFW computers have Acrobat Reader installed and you should have no trouble downloading the “My Thoughts” material. Besides, at IPFW the computer paper is free!

It is critical that you keep your computer working! If it fails, you need to take immediate action because in normal circumstances you are going to be held to the published deadlines that are in the Calendar. If your computer “takes a dump” go to one at IPFW, your local library, your place of work or that of a friend’s or neighbor’s but don’t dilly-dally!

Will I need the course textbook for this course?

Definitely yes. A textbook is required. Use it to amplify the material in the “My Thoughts” section on the Website that I have prepared. In addition, the CDROM that is included with the text should be of help to you, too. Also, if you are relying on the PDF version, remember that the text will have many of the figures that you will need.

What type of quizzes and exams do you give?

My quizzes and exams are going to be of the objective type: primarily multiple choice and true/false. Quiz and exam questions will come almost entirely from the “My Thoughts” material in each chapter. Quizzes and tests will be given online. There will be specific instructions on how to take them that I will detail later.

What will my grade be based on? Your grade will be partially determined by your performance on several Quizzes and Exams. Other assignments include discussions and a short, introductory essay that introduces yourself, and there will be two small projects to complete during the summer session. You will be given ample time to get these done and due dates will be posted on the course calendar. A brief summary of each project and group discussions follow:

Genetics Family Pedigree - After learning the rudiments of human genetics you will be asked to pick a human trait and trace it through a portion of your family tree to help you get a better understanding of basic inheritance patterns. Don't worry if you have no immediate family- we can work out an acceptable alternative. This is a fun and very instructive project and if you pick an easily identifiable trait it is easy to gather the data! When due, the Genetics Pedigree needs to be sent to me either by US postal mail or by dropping it off in the Biology Dept. Office in SB (Science Building) 330. Be sure to save an extra copy for yourself.

Ethics Essay - This short essay of 3-4 pages will encourage you to give some deeper thought about an ethical concern that has biological relevance. You will be given a choice of what you would like to write about and will be asked to take a stand - either for or against the topic. Part of this project will involve you interviewing 2 other people to get their feelings on the subject and to see if they had any influence on your thinking. When due, send by US postal mail or you may drop it off in the Biology Dept. Office. Save an extra copy for yourself.

Group Discussions - There will be 3 group discussions during this summer semester. The approximate dates for these are listed in the Course Outline below Syllabus below. Please refer to the Calendar for specific dates.

Is there going to be any extra credit available at the end?

No, other than a 5 point anonymous evaluation of the class. If I make additional extra credit available for one student, I have to make it available for all. We do not have the time to do all of the extra evaluation required.

Spend your time doing a good job on the regular assignments and projects and in preparing very thoroughly for quizzes and exams and you should do just fine. Although not technically extra credit, the "Getting to Know You" essay at the beginning of the course is a "freebie" for 10 points but you have to do it to get the credit.

Can I contact you using your regular e-mail?

Please do not unless it is an emergency. Learn to use the mail function within the Web version of the course. Normally, questions that are sent to me in regular email will be returned to you unanswered. You must use the Vista class mail.

Point Distribution and Course Grading

4 Lecture Exams = 400 points

1 shorter Lecture Exam = 80 “

4 Quizzes = 80 “

2 Outside Assignments = 75 “

Getting to Know You = 10 “

3 Group Discussions = 48 “

Total = 693 points

Grading will be on an absolute scale as shown below:

A = minimum of 90% (624 points)

B = minimum of 80% (554 points)

C = minimum of 70 % (485 points)

D = minimum of 60% (416 points)

You must have an overall average of 60% to pass the class.

End

(see Course Outline - next page)

Course Outline

Please note: Specific dates for assignments, exams and quizzes will be listed in the Course Calendar (icon is in Tool Bar on HomePage). Only the weeks are listed below.

Introduction to Course - Learn Navigational Skills (see icons at bottom of Homepage) and get familiar with the biological organization of the course. The “lecture” material is entitled as “My Thoughts” and is found by clicking on the Units icon. This is the material that the quizzes and exams will be prepared from.

Mon., May 14 of Week 1 to Tue., May 22 of Week 2

PART 1. - Introduction, Cellular Biology, and Mendelian Genetics

Part 1. is subdivided into 3 modules which you will see in the Outline on the Web and in the Course Calendar.

Lectures - “My Thoughts”

- The Science of Biology - (Chpt. 1)
- Evolution and Ecology - (Chpt. 2) Skip for now.
- The Chemistry of Life - (Chpt. 3)
- Cells - (Chpt. 4)
- Energy and Life - (Chpt. 5)
- How Cells Acquire Energy - (Chpt. 6)
- How Cells Divide - (Chpt. 7)

Essays -

“Getting to Know You” (short autobiography) (10 points)

Group Discussions -

Disc.1 - World Hunger from the Biological Perspective (16 points)

Assignments -

None here - but look ahead to Genetics Pedigree in PART 2.

Quizzes -

Quiz 1. - over Chapters 3 and 4 (20 points)

Exam 1.

Covers Chapters 1- 7. Skip Chpt. 2 for now (100 points)

Wed., May 23 of Week 2 to Fri., June 1 of Week 3)

PART 2. Mendelian and Molecular Genetics, Evolution and Diversity of Prokaryotes

Lectures - “My Thoughts”

Foundations of Genetics - (Chpt. 8)

How Genes Work - (Chpt. 9)

“The New Biology” (Chpt. 10 only)

Skip chapters 11 and 12

Evolution - (1st part of Chpt. 2 only)

Evolution and Natural Selection - (Chpt. 13)

How We Name Living Things - (Chpt. 14)

The First Single-Celled Creatures - (Chpt. 15)

Group Discussions -

Disc. 2 - Genetics Issues (16 points)

Assignments -

Start Genetics Pedigree (35 points)

Quizzes -

Quiz 2. - over Chapters 8 and 9 - (20 points)

Exam 2. -

Covers Chpts. 8-10, first ½ of Chpt. 2 on Evol., and Chpts. 13-15

Sat., June 2 of Week 3 to Fri. June 8 of Week 4

PART 3. Diversity of Eukaryotes

Lectures - “My Thoughts”

Advent of the Eukaryotes - (Chpt. 16)

Fungi Invade the Land - (Chpt. 17)

Evolution of Plants - (Chpt. 18)

Skip Chapters 19 and 20

Evolution of the Animal Phyla - (Chpt. 21)

History of the Vertebrates - (Chpt. 22)

How Humans Evolved - (Chpt. 23)

Essays -

Start Ethics Essay - (40 points)

Group Discussions -

Disc. 3 - Diversity Issues (Evolution) (16 points)

Assignments -

Genetics Pedigree is due (send by US postal mail or drop off at Bio.office).

Quizzes -

Quiz 3. over Chapters 16 and 17 (20 points)

Exam 3. -

Covers Chapters 16 - 23 (100 points)

Sat., June 9 of Week 4 to Fri., June 15 of Week 5

PART 4. Human Physiology, Reproduction and Development

Lectures - "My Thoughts"

The Animal Body and How it Moves - (Chpt. 24)

Circulation and Respiration - (Chpt. 25)

The Path of Food Through the Animal Body - (Chpt. 26)

How the Animal Body Defends Itself - (Chpt. 27)

The Nervous System (light treatment) - (Chpt. 28)

Chemical Signaling in the Animal Body (light treatment) - (Chpt. 29)

Reproduction and Development - (Chpt. 30)

Essays -

Ethics Essay is due (send by US postal mail or drop off).

Group Discussions -

None

Quizzes -

Quiz 4. over Chapters 24 and 25 - (20 points)

Exam 4 -

Covers Chapters 24-30 - (100 points)

Sat., June 16 of Week 5 to Thur., June 21 of Week 6.

PART 5. Ecology and Behavior

Ecosystems - (Chpt. 31)

Evolution and Ecology - (2nd half of Chpt. 2 only)

Populations and Communities - (Chpt. 32)

Behavior and the Environment - (Chpt. 33)

Planet Under Stress - (Chpt. 34)

Exam 5 - Given during Wed/Thur of Week 6

Covers Part 5 only (80 points)

End

