

BIO 101, INTRODUCTORY BIOLOGY
Biology 101-111
Fall 2005

INSTRUCTOR: Shelia Reichard
E-mail: sreichar@ivytech.edu
Phone: 765-964-5561(home) or 1-800-659-4562 (Ivy Tech)
Address: Shelia Reichard
Ivy Tech Community College of Indiana Region 9
2325 Chester Blvd
Richmond, IN 47374
Mailbox: Located at Chester Blvd building
Office Hours: I do not have an office location. Meetings with me
need to be scheduled in advance.

COURSE TITLE: Introductory Biology

COURSE NUMBER: BIO 101

PREREQUISITES: Demonstrated competency in writing, reading, and computation through appropriate assessment or earning a grade of "C" or better in ENG 025, Introduction to College Writing II; ENG 032, Reading Strategies for College II; and MAT 050, Basic Algebra.

DIVISION: General Education

PROGRAM: General Education

CREDIT HOURS: 3

CONTACT HOURS: Lecture: 2 Lab: 2

DATE OF LAST REVISION: Spring, 2004

EFFECTIVE DATE OF THIS REVISION: Summer, 2005

CATALOG DESCRIPTION: Introduces the basic concepts of life. Includes discussion of cellular and organismal biology, genetics, evolution, ecology, and interaction among all living organisms. Addresses applications of biology to society.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Apply the scientific method to problems encountered in everyday life.
2. Provide examples of the historic development of current scientific thought.
3. Demonstrate basic skills of metric measuring, data collection, data interpretation, and microscope use.
4. Interpret simulations of biological systems and relate them to concrete applications.
5. Describe plant structures and functions including reproductive biology, development, and regulation of systems.
6. Identify the internal and external structures of both the prokaryotic and eukaryotic cells and define the functions of each.
7. Recognize energy pathways such as photosynthesis, respiration, and overall cellular metabolism.
8. Describe the basic processes of mitosis and meiosis and relate them to the life cycle of organisms.
9. Summarize the mechanisms of inheritance and the processes by which protein and DNA are synthesized.
10. Describe the major principles of genetics and biotechnology.
11. Understand the mechanisms of natural selection and their impact on evolution.
12. Identify major ecological concepts such as communities, energy flow and nutrient cycling, and renewable and non-renewable resources.
13. Describe the general properties and characteristics of the biological kingdoms.
14. Describe human structures and functions including reproductive biology, development, behavior, and regulation of organ systems.
15. Apply the scientific method and the knowledge gained from the course to societal concerns.

COURSE CONTENT: Topical areas of study include –

Scientific method	Basic inorganic and organic chemistry principles
Animal biology	Cell cycle and the mechanisms of molecular genetics
Plant biology	Natural selection and evolution
Biotechnology	Cell structure and function
Genetics	General process of energy transformation: enzyme function,
Ecology	photosynthesis, aerobic and anaerobic respiration
Phylogeny	

SUGGESTED LAB CONTENTS:

Microscopy	Metric system
Osmosis	Chemistry
pH/Model building	Cell structure
Genetics	Environmental
Dicotomous Key	Simulation of protein synthesis
Enzyme activity	Comparative anatomy
Plant anatomy	

REQUIRED TEXT: *Discover Biology*. 2nd edition. Cain, Damman, Lue, and Yoon.

ACADEMIC HONESTY STATEMENT:

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

ADA STATEMENT:

Ivy Tech State College seeks to provide reasonable accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, please contact the Office of Disability Support Services.

If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classroom.

METHODS OF INSTRUCTIONAL DELIVERY:

The chapter readings from your text are listed in the outline and schedule. Additional readings and assignments may be made at appropriate times during the semester. It is important to read the required material before completing assignments. CDs given with the textbook along with appropriate Internet web sites should be used to reinforce subject matter studied.

METHODS OF EVALUATION/GRADING:

Assignments will be posted weekly for each chapter on the assignment section of the web site. Due dates can be found on the last page of the syllabus as well as in the Tasks section of the website. Assignments will consist of several questions from the chapter for the week (there will be a link to post your answers on the website). The questions are to be answered and turned in per the instructions that will be given with the first assignment. **Assignments turned in late-even one day late-will automatically be deducted 40%.**

Discussion board assignments will be required almost every week. This is a way for students to interact with each other and get to know one another. More information on these can be found in the assignment section of the website.

Labs will be assigned weekly; lab assignments will be posted with the chapter assignment. A due date will be given in the task area of blackboard. Labs should be put in the digital drop-box on the blackboard web site. (If there are problems, you can e-mail labs to me, send them to the Ivy Tech address shown on the first page, fax them to me at 765-962-8741 or drop them off to my Richmond mailbox). **Any labs turned in after the due date will be deducted 40%.**

Quizzes will be given throughout the semester; they will be worth 10 points each. They will be posted on the web site with the weekly assignment (there will be a link given for you to take the quiz). You will be able to take the quizzes from home, but they will be timed and deducted points if the time is exceeded. **Quizzes will be deducted 40% if they are taken late.**

A cumulative final will be given. **The final must be taken by midnight of the last available date.** The date for the final is given at the end of the syllabus. The final will be worth 60 points. **The final must be taken with a proctor at a test site.**

Paper/Project: Each student (you may work in groups as long as you notify the instructor of this before hand) will be expected to write a 2-3 page paper or complete a similar size project. The topic must be related to Chapters 43, 44, or 45 in your text. You may decide to use another method besides a paper to present your case (PowerPoint, creation of a leaflet handout, etc) as long as the method is approved by the instructor. The project will be worth 50 points. More information on the project/paper requirements (if you choose to do a paper) can be found under course information on the blackboard website. **The paper will be deducted 10% per day late.**

There will be no opportunity for extra credit in this class.

GRADING SCALE:

Grades will be posted on the web site. Please notify the instructor immediately if you feel there is an error in your grades. The following is a tentative point breakdown for the class:

Assignments/Labs	
Discussion Boards	80 points
Quizzes (4 each at 10 pts ea)	40 points
Paper	40 points
Final	60 points
Total points	220 points

Grades will be assigned using a 10-point scale.

- A=90-100%
- B=80-89%
- C=70-79%
- D=60-69%
- F=Below 60%

MAKE UP POLICY:

If a student misses work, it is the student's responsibility to contact the instructor regarding the work. All work **MUST** be turned in by the due date or will be penalized for being late.

ATTENDANCE POLICY:

As this is an Internet class, we will not be meeting at a regular time. **Students MUST send an e-mail to my address weekly by Tuesday as a check-in. Please remember to include your name on all correspondence, as well as the class (BIO 101).** If a student is not checking in, the instructor may have cause to no-show withdraw them from the class. Any questions that pertain to class can be sent to my e-mail or posted on the discussion board. If you are having difficulty with the Internet site, please direct

questions to Barbara Ray, Instructional Technology Specialist, at bray@ivytech.edu or 765-966-2656 or 1-800-659-4562.

DISABILITY SERVICE COORDINATOR:

Desiree Polk-Bland
Ivy Tech State College
2325 Chester Blvd.
Richmond, Indiana 47374
1-800-659-4562
1-765-966-2656

Minimum Technology Requirements for an Internet Course

- A computer running Windows 95, 98, 2000, NT, ME or XP or MacOS 9 or MacOS X
- A minimum of 64 MB of RAM
- Connection to the Internet using a 56K Modem or higher
- Microsoft Internet Explorer. JavaScript and Cookies must be enabled in order for Blackboard to function properly

RIGHT OF REVISION: This syllabus may be revised at any time by the instructor.

DATE OF LAST REVISION: 07/23/2005

EFFECTIVE DATE OF THIS REVISION: Fall, 2005

Biology 101 Internet Class

Tentative Outline (Subject to change)

Date	Week	Chapter	LAB	DUE DATE
8/22	Week 1	Syllabus Introduction	None	September 03
8/28	Week 2	Chapters 1 and 19	Metric	September 03
9/4	Week 3	Chapter 2 and 3 Quiz 1	Biomolecules (Start Diffusion lab)	September 10 September 13
9/11	Week 4	Chapter 5 and 6	Microscope (Cells)	September 17
9/18	Week 5	Chapter 24	Diffusion/Osmosis	September 24
9/25	Week 6	Chapter 7 and 8	Photosynthesis	October 01
10/2	Week 7	Chapter 10 Quiz 2	Mitosis/Meiosis	October 8 October 11
10/9	Week 8	Chapter 12 and 13	Genetics	October 15
10/16	Week 9	Chapter 14 and 15 Quiz 3	Protein	October 22 October 25
10/23	Week 10	Chapter 43, 44, and 45	NONE (WORK ON PROJECT)	
10/30	Week 11	Chapter 25 to 29*	Frog Dissection	November 05
11/6	Week 12	Chapter 30 to 34**	Plant Anatomy	November 12
11/11	Last Day to withdraw without receiving a grade (Contact Student Services at the Richmond Campus 1-800-659-4562 or 765-966-2656)			
11/13	Week 13	Chapter 36 and 37 Quiz 4	Dichotomous Key	November 19 November 29
11/20	FALL BREAK (NO CHECK IN OR ASSIGNMENTS DUE THIS WEEK)			
11/27	Week 14	PROJECT DUE on or before SATURDAY December 3		
12/4	Week 15	FINAL-Must be taken by SATURDAY December 10		
12/11	Week 16	ANY LABS AND ASSIGNMENTS TURNED IN LATE MUST BE RECEIVED BY TUESDAY DECEMBER 13 TO GET PARTIAL CREDIT-NO EXCEPTIONS		

Course Syllabus Addendum

Facility Closing Announcement

If any Ivy Tech Community College Region 9 facilities will be closed due to inclement weather or other emergency conditions, the closing will be announced on the radio and television stations listed below. Remember, even if College facilities remain open, you are expected to use your judgment as to whether the existing weather conditions permit safe travel. Notify your instructor if you do not attend class due to weather or other emergency conditions.

Below is the list of radio and television stations that will be contacted for facility closing announcements. Radio Stations: WKBV (AM 1490); WQLK (FM 96.1); WCNB (AM 1580); WFMG (FM 101.3); WMDH (AM 1550); WHON (AM 930); WIFE (FM 100.3); WKWH (FM 94.3), WCTW (AM 1550), WMDH (FM 102.5), Z93 (WGTZ FM 92.9), K99.1 (FM); Television Stations: Channel 7 WHIO (Dayton); Channel 2 WDTN (Dayton); Channel 22 WKEF (Dayton). Closings are also announced on the website, www.ivytech.edu/richmond/.

Certification/Licensure Training Disclaimer

Ivy Tech Community College of Indiana cannot guarantee that any student will pass a certification or licensing exam. Your success will be determined by several factors beyond the instruction you are given in the classroom including your test-taking skills, your willingness to study outside of class, and your satisfactory completion of appropriate practice exams. Certification and licensure exam questions are drawn from databases of hundreds of possible questions; therefore, a thorough understanding of the subject matter is required. The goal of Ivy Tech is providing a certification exam studies class is to assist you in understanding the material sufficiently to provide a firm foundation for your studies as you prepare for the exam.

Important Message for Pell Grant & Student Loan Recipients

If you withdraw from, or stop attending, all of your classes before 60% of the term has passed, you will owe money to the federal government and/or the College. In the event that this becomes necessary, see a student services advisor before you withdraw from classes or stop attending.

Instructor Initiated Revoke of Course Enrollment

Instructors may administratively withdraw a student from class enrollment for attendance and disciplinary issues with the approval of academic affairs. For attendance issues, the enrollment withdrawal may be initiated within the 60 to 75% time-period of the course. The registrar's office will notify the student if this action occurs.

Learning Resource Center

The Learning Resource Center (Rm. 132, Main Campus Building) is open to students when the Main Campus Building is open. Tutors are available: Monday – Thursday, 9:00 am – 7:00 pm; Friday 9:00 am – 5:00 pm; Saturday 9:00 am – 12:00 p.m.

Writing Across the Curriculum

Unless the instructor informs you otherwise, this class participates in the Writing Across the Curriculum program. All papers are required to meet professional standards in English composition. Specifically, all papers will:

- Be word processed in MLA or APA format, as designated by the instructor;
- Demonstrate professional writing through correct grammar and spelling;
- Demonstrate the development of a thesis using basic principles of composition.

Math and English Across the Curriculum

Ivy Tech Community College Region 9 participates in a statewide College initiative to assess math and English skills across the curriculum. For the first component of this project, students in MAT111 and ENG111 are assessed at the end of the academic term for math and English proficiency. From this assessment, a sample is identified as benchmark data. The second component of this assessment is comprised of students enrolled in selected program defined capstone courses. Sample data from this group will be compared to the benchmark for assessing retention of math and English competencies.

Library Services

Ivy Tech Community College Region 9 students have access and student use privileges for the Indiana University East (IUE) Library located in Hayes Hall on the Richmond IUE campus. In addition to the campus library services, the Ivy Tech Virtual Library is available to students on and off campus, offering full-text journals and books and other resources essential for course assignments. Go to <http://www.ivytech.edu/library/> and choose the Virtual Library Link for Richmond.

Academic Honesty Statement

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating.

This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

ADA Statement

Ivy Tech Community College Region 9 seeks to provide effective services and accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, please contact Desiree Polk Bland, Director of Student Support and Development, Office of Disability Support Services, Ivy Tech Community College of Indiana Region 9, 2325 Chester Boulevard, Richmond, IN, 765-966-2656 ext. 334, for Disability Support Services. If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classrooms.

Copyright

Material in this course is subject to protection of Copyright law.

Right of Revision

The course content is subject to change on syllabus/outline.