

**BIO 112 Human Aspects of Biology, Section 002, 1:00-1:50 pm MWF, Science 214**  
(BIO112 Laboratory is a co-requisite for this course)

**You are responsible for understanding and knowing  
all course policies described in this handout.**

**Instructors:** Dr. Joy O’Keefe   **Office:** Science 273   **Phone:** 237-4520  
**E-mail:** Joy.OKeefe@indstate.edu   **Office hours:** Mon 12-1 pm and Tues 3-4 pm

**Supplemental Instructors:** Ms. De’Ja Echols                   **Email:** dechols@sycamores.indstate.edu  
See last page for more information on supplemental instruction

**Readings:** Concepts in Biology (2013) by OpenStax College (ISBN: 978-1-938168-11-6)  
\$22 used or \$29 new at the ISU Bookstore or **free** online openstaxcollege.org

Other readings will be provided via Blackboard and announced in class. Read the assigned material before class, attend class to find out what material we consider important, and then re-read the assigned readings, concentrating on the material we have covered.

**You also need a stack of 3 X 5” notecards of any color.**

**Key Dates:**

Jan 23	Last day for 100% refund; last day to drop a class with no grade
Jan 30	Last day for 75 percent refund
Feb 13	Last day for 25 percent refund
Apr 10	Last day to withdraw with W grade

**Course Philosophy:** *Science is a way of obtaining knowledge*, not a collection of facts. This course is intended to develop your ability to use critical thinking and logical analysis to evaluate scientific hypotheses based on observed facts and to distinguish true science from pseudo-science. I will help you to develop the skills needed to understand new scientific information, apply it to your life in a rapidly changing world, and participate as an informed citizen in societal decisions related to science. You will receive up-to-date information covering a wide variety of topics in biology, which we may use to generate hypotheses and formulate testable predictions. Most importantly, we will consider the relevance of the information to individuals and society, and discuss controversies surrounding scientific information.

**Foundational Studies Outcomes and Objectives Addressed by this Course:**

BIO 112 provides 3 credit hours as a Foundational Studies Laboratory Science course.

Foundational Studies Learning Outcomes addressed in this course:

- Locate, critically read, and evaluate information to solve problems.
- Critically evaluate the ideas of others.
- Apply knowledge and skills within and across the fundamental ways of knowing (natural sciences).

Laboratory Science Learning Objectives addressed in this course:

- Articulate how data are acquired, and how hypotheses and theories are constructed.
- Use the scientific method to formulate and test hypotheses.
- Apply scientific theories to predict the nature and behavior of new systems, environments, or scenarios.
- Articulate how current issues in science and technology intersect with populations, institutions, and societies.

**How to Do Well in this Course:** Doing well in a course involves more than spending enough hours studying; it requires **effective** learning. Fortunately, we can learn new ways to learn, and acquiring new learning skills is one of the most important ways to be successful in college. Dr. Stephen Chew and Samford University have developed a set of videos about effective study skills, which you should review. **Your first quiz of the semester will be over this material.**

**Make it Stick<sup>1</sup>:** Studies have shown that re-reading material is not enough to achieve long-term retention of new material you are learning. **Practicing retrieval of information is more effective.** When you are studying, use methods that force you to retrieve the material—flash cards, writing and answering quiz questions, outlining your notes without looking at them, etc. **Space out your retrieval practice**—don't study by cramming all at once. If your study practice is effortful and difficult, you will retain more.

**Extra Help:** If you have any apprehension about the course, see me right away for help. If you wait until the end of the semester, you will not have time to improve your study skills. De'Ja Echols, the **Supplemental Instructor, will hold regular study sessions outside of class.** Take advantage of any study sessions she holds! **Free Biology tutoring is available through the Science Help Center in Science 115** (I will email you about open hours). The Center for Student Success also provides tutoring services. Contact them at 237-2700 or visit their office on the 1st floor in Normal Hall.

**Blackboard:** The course information, syllabus, and lecture notes will be available on Blackboard (<http://blackboard.indstate.edu>). Scores on exams and quizzes will be posted on Blackboard. **Do not trust Blackboard to calculate your overall percentage.** Check your raw scores regularly and quickly inform us about any score that has been entered incorrectly. You can calculate your overall percentage at any time during the semester so you should be able to adjust your effort accordingly.

**Laptop Usage:** **Laptop use during lectures is prohibited unless you have obtained prior permission from the instructor.** Those interested in using a laptop for note-taking must register with the instructor and sit in the front few rows of class. Your use of a laptop will only be permitted if it remains within the bounds of Code of Student Conduct and it conforms to the provisions of this course as laid out in this syllabus. **Laptops may not be used for any purpose other than note-taking and class-related tasks;** students may not use laptops for activities that may distract either the laptop user or others (e.g., Facebook, YouTube, shopping, browsing the Internet) or that violate the Code of Student Conduct.

**Attendance:** I will record attendance every day via participation exercises. **Attendance in class is critical to your success in this course.** If you miss more than 3 classes, I will reduce your final grade by 2 points for every unexcused absence. I will only accept excuse letters on letterhead (e.g., doctor's note, court appearance, ISU trip). If you know beforehand that you will be unable to take an exam (e.g. any scheduled event, including court appearances, medical appointments, funeral, as well as University activities), you **must** make arrangements with me before the regular exam is given; otherwise, you will receive a zero for that exam.

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<sup>1</sup> Make it Stick: The Science of Successful Learning  
by Peter C. Brown, Henry L. Roediger III, and Mark A. McDaniel

**Participation:** Your presence and involvement in class will be assessed every day through participation points for work that takes place in class. **This will occur every day except exam days.** You will receive 2 points for a correct answer and 1 point for an incorrect answer. **However, if you miss class, you cannot make up in-class activities.** Make a note of your answer before you turn in a notecard. I will give you the correct answer in the next class or on Blackboard.

**Quizzes:** Quizzes will be given outside of class on Blackboard and will consist of multiple-choice questions. Quizzes will be open for 2 days and are open book; however, quizzes are timed. **There are no makeups for missed quizzes unless you notify me within 24 hours of the quiz closing regarding your well-documented, excusable absence.**

**Exams:** Exams may contain T/F, multiple choice, and written questions, and will require you to understand the material; memorizing the class notes will not be sufficient. Exams may vary in terms of total points. Any questions that you may have about your exam that might involve a change of score (i.e., re-grades, addition errors) must be made within 7 days of the day that I post your exam grade. If you wish to review your test, you may stop by during my office hours or make an appointment with me.

**Assignments:** I will give a few small outside class assignments during the semester. Details and due dates will be given in class. I will not accept late assignments.

**SI Sessions:** See last page of syllabus for more information.

#### Point Opportunities:

Grade Percentage	Point Type	Sum of Points
10%	Participation	70
23%	Quizzes	160
57%	Exams + Final	400
4%	Outside Assignments	30
6%	SI Sessions	40
<b>TOTAL</b>		<b>470</b>

#### Grading Scale:

Letter	Percentage		Letter	Percentage
A+	≥ 98.00%		C+	≥ 78.00%
A	≥ 92.00%		C	≥ 72.00%
A –	≥ 90.00%		C–	≥ 70.00%
B+	≥ 88.00%		D+	≥ 68.00%
B	≥ 82.00%		D	≥ 62.00%
B–	≥ 80.00%		D-	≥ 60.00%
			F	< 60.00%

Your grade in this course will be based solely on your performance on the above components. Scores will **not** be rounded up; to achieve a particular grade, you must earn at least the minimum score for that grade.

*Other Stuff You Need to Know:*

**Email format:** I will not respond to emails that do not have “BIO 112” in the subject line and your name and contact info (email and phone number, if needed) in the body of the message. Courteous emails with a salutation (e.g., “Dr. O’Keefe”) and a closure (e.g., “Thank you, Sam”) are expected. I will respond to your emails within 2 business days from receipt.

**Changes to the syllabus:** This syllabus is a plan for the course, but it may be necessary for me to deviate from this plan. If needed, I will announce changes to the schedule in lecture. If you miss class, it is your responsibility to find out about changes to the schedule.

**Statement on Academic Freedom:** “Teachers are entitled to freedom in the classroom in discussing their subject, but they should be careful not to introduce into their teaching controversial matter which has no relation to their subject.” The preceding comes from the American Association of University Professors statement on academic freedom. Though the entire statement speaks to many issues, it is this portion on the conduct of the course that is most relevant. For the purpose of Foundational Studies courses this means that course instructors have the right to conduct their class in a fashion they deem appropriate as long as the material presented meets the learning objectives laid out by the entire faculty.

See: <http://www.aaup.org/AAUP/pubsres/policydocs/contents/1940statement.htm>

**American with Disabilities Act Statement:** “Indiana State University seeks to provide effective services and accommodation for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, you are required to register with Disability Support Services at the beginning of the semester. Contact the Center for Student Success at 237-2700 or visit their office on the 2<sup>nd</sup> floor in Gillum Hall. The Center will ensure that you receive all the additional help that Indiana State offers. If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classrooms.”

**Title IX:** Indiana State University fosters a campus free of sexual misconduct including sexual harassment, sexual violence, intimate partner violence, and stalking and/or any form of sex or gender discrimination. If you disclose a potential violation of the sexual misconduct policy I will need to notify the Title IX Coordinator. Students who have experienced sexual misconduct are encouraged to contact confidential resources listed below. To make a report or the Title IX Coordinator, visit the Equal Opportunity and Title IX website: <http://www.indstate.edu/equalopportunity-titleix/titleix>

**Academic Integrity:** In this class, you must adhere to Indiana State University’s Code of Student Conduct, which can be found at <http://www.indstate.edu/sci/>. In the Code, plagiarism is defined as “intentionally or carelessly presenting the work of another as one’s own.” Consult the Code of Student Conduct and the Plagiarism Tutorial: <http://library.indstate.edu/tools/tutorials/plagiarism/> to learn more about what constitutes plagiarism. I will be happy to answer your questions about plagiarism as you work on assignments for this class. Any violation of the Code, such as cheating, is automatically forwarded to the chair of the Department of Biology and to the appropriate College Dean. Avoid any action (e.g., wandering eyes or unprotected answers) that could remotely be construed as cheating. Neither talking nor the use of electronic devices of any kind will be permitted during examinations. The penalty for cheating is an “F” in course.

### Schedule for BIO 112, Section 1 & 2, Spring 2017

Major topics and lecture titles			
Day	Date	Month	Food Matters
W	18	Jan	1. Introduction/hypotheses
F	20	Jan	2. The scientific method & biogeochemical cycles
M	23	Jan	3. The omnivore's dilemma (Pollan, 2006): what to eat?
W	25	Jan	4. The stuff we're made of
F	27	Jan	5. The stuff we eat
M	30	Jan	6. The stuff we eat/Impacts of the western diet/Food, Inc.
W	1	Feb	7. <i>E. coli</i> /Food, Inc.
F	3	Feb	8. Modern vs. traditional diets/Food, Inc.
M	6	Feb	9. Tiny cells/Food, Inc.
W	8	Feb	10. What's for dinner? GMOs.
F	10	Feb	<i>Exam 1</i>
Cancer is Personal			
M	13	Feb	11. What is cancer?
W	15	Feb	12. Cell lives: division and apoptosis
F	17	Feb	<i>SI Session in class</i>
M	20	Feb	13. How do cancerous mutations develop?
W	22	Feb	14. Your three lines of defense
F	24	Feb	15. Vaccines and human papilloma virus
M	27	Feb	16. Epidemiology - spotlight on polio
W	1	Mar	17. Which is worse - a virus, bacteria, or cancer?
F	3	Mar	18. Focus on leukemia/Finding and staging cancer
M	6	Mar	19. Finding and staging cancer
W	8	Mar	20. Cancer treatment and prevention
F	10	Mar	<i>Exam 2</i>
MWF	13-17	Mar	<i>Spring Break</i>
Born to Run			
M	20	Mar	21. What makes a mammal a mammal?
W	22	Mar	22. Mammal origins and phylogeny rules
F	24	Mar	23. Is sitting the new smoking?
M	27	Mar	24. Problem solving
W	29	Mar	25. Your Inner Monkey
F	31	Mar	26. Why do humans run (so well)?
M	3	Apr	27. Fossil evidence
W	5	Apr	28. It's cool to sweat
F	7	Apr	<i>SI Session in class</i>
M	10	Apr	29. Listen to your heart
W	12	Apr	30. Running is a drug
F	14	Apr	<i>Exam 3</i>
The Future of Life			
M	17	Apr	31. Biophilia for biodiversity
W	19	Apr	32. Bioblitz
F	21	Apr	33. Diversity of life on Earth
M	24	Apr	34. Why biodiversity matters
W	26	Apr	35. HIPPO humans
F	28	Apr	36. Collapse/overpopulation
M	1	May	37. Life in the Anthropocene
W	3	May	38. Indiana bats: a conservation case study
F	5	May	39. The future of life: sustainability and solutions
<b>FINAL EXAM</b>		<i>May 10 1:00 PM</i>	

### Supplemental Instruction

Supplemental instruction (SI) is provided for this course. De'Ja Echols will work with me to help you to maximize your learning. De'Ja knows the course content, will reinforce key points of learning, and can assist you with elements for which you may be uncertain. Supplemental instruction can be an important way for you to do well in this course. Attendance at SI sessions is an expectation of this course, as described below.

**You are expected to attend at least one SI session before each test. You will earn 10 points for attending one full SI session in each of these four periods:**

Major topic	Period	Did you attend? You earn credit for only 1 session/period.
Food Matters	23 January - 8 February	
Cancer is Personal	13 February - 8 March	
Born to Run	20 March – 12 April	
The Future of Life	17 April – 5 April	

You may attend as many SI sessions as you'd like. De'Ja will announce times and locations for SI sessions for each major topic period by 23 January, 13 February, 20 March, and 17 April. After De'Ja announces the session times, you must email Dr. O'Keefe within 2 business days with a documented excuse if you will not be able to attend any SI sessions during that portion of the course. I will assign you a substantial makeup exercise to complete in lieu of attending the SI session. Otherwise, you will forfeit the 10 points for the period.

SI sessions will not be held at any time when the University is closed or classes do not meet (e.g., Spring Break). The last day of Study Week will also be the last day of the SI for the semester.

Here is what you can expect at an SI session and what will best aid you by way of preparation for a session:

1. Bring to the session your text, notes, laptop computer, and other materials.
2. The SI will be present in the designated and advertised location during the scheduled time for each session.
3. The SI will ensure that your attendance is recorded in each session, and subsequently reported to your instructor.
4. The focus of each SI session will be on the most recent material covered in class. The SI will not review material covered in past weeks for individuals who have not attended regularly.
5. The SI will address questions relevant to topic(s) and provide exam preparation strategies and methods.