

Course Home - Syllabus and Pacing Guide

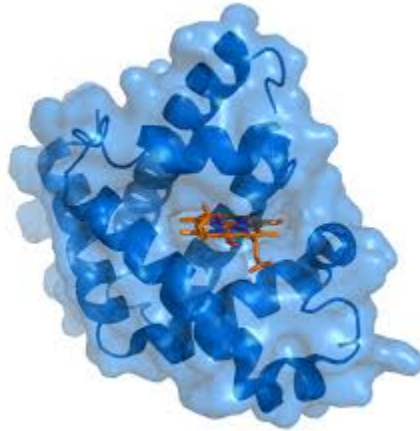
Syllabus

BIOE-501: Biochemistry

Teaching Contact: Gilandra K. Russell Ph.D.

(gilandra.russell@agsfaculty.indwes.edu)

Written By: Gilandra K. Russell Ph.D.



Course Description

This course provides an intermediate understanding of chemical principles in biology and focuses on the study of proteins, carbohydrates, lipids, and nucleic acids in a biological context. Enzymes, metabolism, and gene expression are also investigated. Prerequisite: a bachelor's degree with a Biology major or must be state certified (in any state) to teach Biology at a secondary school level. Undergraduate coursework must include a "C" level or higher in Introductory Biology, Introductory Biology Lab, General Chemistry, General Chemistry Lab. Note: This course is designed for those seeking the credentials required by many regional accrediting bodies in order to be able to teach advanced placement, concurrent early college, and undergraduate college Biology courses.

Course Outcomes

Upon successful completion of this course you will be able to:

1. Describe the chemical principles involved in biological processes.
2. Explain the basic structure of biological molecules.
3. Explain the relationship between molecule structure and function.
4. Identify how enzymes work and how to measure their activity.
5. Describe the metabolic processes of the major biomolecules in the cell and their regulation.
6. Explain how cells obtain energy through cellular respiration.
7. Choose the appropriate biochemical lab technique or instrument to study a given molecule.

Course Textbook

Lehninger. *Principles of Biochemistry* (6th ed.). Nelson & Cox (Freeman, W. H. & Company).

Course Technology

None

IWU Diversity Statement

IWU, in covenant with God's reconciling work and in accordance with the Biblical principles of our historic Wesleyan tradition, commits to build a community that reflects Kingdom diversity.

We will foster an intentional environment for living, teaching and learning, which exhibits honor, respect, and dignity. Acknowledging visible or invisible differences, our community authentically values each member's earthly and eternal worth. We refute ignorance and isolation and embrace deliberate and courageous engagement that exhibits Christ's commandment to love all humankind.

Grading Scale

Grade	Quality Points Per Credit	Percentage	Score
A	4.0	95%–100%	950–1000
A-	3.7	92%–94.9%	920-949
B+	3.3	89%–91.9%	890-919
B	3.0	85%–88.9%	850–889
B-	2.7	82%–84.9%	820–849
C+	2.3	79%–81.9%	790-819
C	2.0	75%–78.9%	750–789
C-	1.7	72%–74.9%	720-749
D+	1.3	69%–71.9%	690-719
D	1.0	65%–68.9%	650-689
F	0.0	0%–64.9%	0–649

Grading Policies

Your grading policy for your course is dependent on your school and program. Your grading policies can be found in the IWU Catalog.

Letter Grade Equivalencies

* A grade of C- or below will require the course to be repeated.

Grade	Description of Work
A	Clearly stands out as excellent performance. Has unusually sharp insights into material and initiates thoughtful questions. Sees many sides of an issue. Articulates well and writes logically and clearly. Integrates ideas previously learned from this and other disciplines. Anticipates next steps in progression of ideas. Example "A" work should be of such nature that it could be put on reserve for all cohort members to review and emulate. The "A" cohort member is, in fact, an example for others to follow.
B	Demonstrates a solid comprehension of the subject matter and always accomplishes all course requirements. Serves as an active participant and listener. Communicates orally and in writing at an acceptable level for the degree program. Work shows intuition and creativity. Example "B" work indicates good quality of performance and is given in recognition for solid work; a "B" should be considered a good grade and awarded to those who submit assignments of quality less than the exemplary work described above.
C	Quality and quantity of work in and out of class is average. Has marginal comprehension, communication skills, or initiative. Requirements of the assignments are addressed at least minimally.

Pacing Guides

Six Week Guide (Used Only in Special Circumstances)

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Module 1	MOD 1					
Module 2	MOD 2	MOD 2	MOD 2	MOD 2	MOD 2	
Module 3	MOD 3					
Module 4		MOD 4				
Module 5		MOD 5				
Module 6			MOD 6			

Module 7			MOD 7			
Module 8				MOD 8		
Module 9					MOD 9	
Module 10					MOD 10	
Module 11						MOD 11

Eight Week Guide (Standard Pacing Guide)

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Module 1	MOD 1							
Module 2	MOD 2	MOD 2	MOD 2	MOD 2	MOD 2	MOD 2		
Module 3	MOD 3							
Module 4		MOD 4						
Module 5			MOD 5					
Module 6			MOD 6					
Module 7				MOD 7	MOD 7			
Module 8				MOD 8	MOD 8			
Module 9						MOD 9		
Module 10						MOD 10		

Module 11							MOD 11	MOD 11
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Expectations, Policies, and Important Student Information

Expectations

Instructor Expectations of Students

- Submit assignments on time. If there are circumstances beyond your control, discuss possible options for completion with your instructor.
- Accomplish work on your own unless otherwise instructed (i.e., do not cheat or plagiarize).
- Contribute substantively to discussions according to assignment guidelines provided.
- Contribute to discussions throughout each workshop rather than waiting until the end of the workshop.
- Contribute substantively to group assignments (if required in course).
- After spending a reasonable amount of time on it, ask your instructor if you do not understand content or instructions. Ask for help early while there is time to fix problems.
- Treat other students courteously and respectfully.
- Every time you enter your course, read and abide by postings made in the Announcements and Faculty Forum. These postings are critical.

Students' Expectations of Instructor

- Set a friendly, open, and encouraging learning environment.
- Guide discussions as needed.
- Set clear rules, standards, and expectations.
- Provide workshop grades and feedback within seven days of assignment due date.
- Provide final grades and feedback within seven days after the last day of class.
- Ensure students treat each other respectfully.
- Respond to student inquiries within 48 hours.

Policies

Late Policy

- No credit is available for postings of any kind made in the discussion forums after a given workshop ends.
- If your instructor approves your submission of late assignments, each assignment score will be penalized 10% per day up to five days late. After the end of the fifth day, late assignments will not be accepted. An assignment is a paper, a project, a team presentation, etc., but not a discussion or quiz/test.
- No late assignments will be accepted after the close of the final workshop.
- **Unless otherwise stated by the course instructor, all assignments are due by 11:59pm EST.**