



Course Number: CHEM461 **Spring 2012**
Course Title: Biochemistry and Biochemical Tech
Credit Hours: 4 Hours
including lecture, laboratory

Instructor: Dr. Dennis Welsh
Office: Hoyt Hall 123
Office Hours: MW: 9:30 am – 12:00 pm
TR: 9:30 am – 12:00 pm
Other days: By Appointment

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Web Page: Natural Science web page at www.peru.edu

Course Description:

In Chemistry 461 you will learn advanced techniques of molecular biology and the molecular aspects of advanced metabolism. You will also be presented with material designed to prepare you for profession school entrance exams.

It is assumed that you will have read the appropriate material in the textbook prior to the lecture. The instructor will keep you posted on the material you should be reading. Time will be available to ask questions about the material in class.

Prerequisites: CHEM431

Required Materials:

Textbook: Horton, et al: *Principles of Biochemistry* (5th Edition)

Laboratory Manual: Will Be Provided

Scientific calculator

Safety goggles. **State law** requires that safety goggles (not safety glasses) be worn in the laboratory. These may be purchased at the Bobcat bookstore. You will not be admitted into the lab without your safety goggles.

Bottle of Dish soap for cleaning equipment in the laboratory

Objectives:

Students completing this course will have:

- 1) acquired a advanced understanding of fundamental biochemical principles
- 2) established a firm basis for the understanding of molecular biology
- 3) developed independent problems solving skills
- 5) prepared for profession school testing
- 6) used graphical analysis to assess the significance of a data set

Assessment Method:

Grades are based on the percentage of total points you accumulated from these sources:

The following list is only an approximate:

Quizzes	= 100 pts
Exams: 3 @ 100 pts	= 300 pts
Final Exam	= 130 pts
Genetic Case Study	= 60 pts
Laboratory	<u>= 130 pts</u> 720 pts

Grading Scale:

A	90-100%	C	70-76.9%
B+	87-89.9%	D+	67-69.9%
B	80-86.9%	D	60-66.9%
C+	77-79.9%	F	Below 60

Attendance Policy:

Students are expected to attend class regularly, to arrive punctually, and to complete all assigned work. Attendance is a privilege and a responsibility represented by not only the student's investment, but also by a significant investment by the State of Nebraska.

There may be material covered in lecture that is not in the text or manuals, as well as important class announcements. If you are not in attendance at the time information or announcements are presented you will still be responsible for that information.

Lecture Schedule

Quiz #1 (40 pts) - Jan 24

<u>Chapter 11</u>	Glycolysis
	Know in detail (Fig. 11.2)

Quiz #2 (60 pts) - Feb 9

<u>Chapter 13</u>	Citric Acid Cycle
<u>Chapter 14</u>	Electron Transport & ATP synthesis

Exam #1 (100 pts) - Mar 1

<u>Chapter 19</u>	Nucleic Acids
<u>Chapter 20</u>	DNA Replication, Repair, and Recombination

Exam #2 (100 pts) - Mar 27

<u>Chapter 21</u>	Transcription and RNA Processing
<u>Chapter 22</u>	Protein Synthesis

Exam #3 (100 pts) - Apr. 24

<u>Chapter 23</u>	Recombinant DNA Technology
	Additional Material As Time Permits

Each exam and quiz must be taken as scheduled. Permission to take a makeup exam must be obtained from me prior to the scheduled time of the exam, otherwise you will receive a zero for the exam. Leaving a phone or e-mail message does not constitute prior permission. Unless you have personally received permission from me it will not be granted after the exam date and you will receive a zero.

Quiz and Exam times are schedule to change, the change will be announced in class. If you are not in attendance the day of an exam/quiz change announcement you are still responsible for taking the exam/quiz at the rescheduled time.

College's Incomplete Coursework Policy

To designate a student's work in a course as incomplete at the end of a term, the instructor records the incomplete grade (I). Students may receive this grade only when serious illness, hardship, death in the immediate family, or military service during the semester in which they are registered prevents them from completing course requirements. In addition, to receive an incomplete, a student must have completed substantially all of the course's major requirements.

Unless extenuating circumstances dictate otherwise, students must initiate requests for an incomplete by filling out an Incomplete Grade Completion Contract, which requires the signature of the student, instructor, and Dean. The Incomplete Grade Completion contract cites the reason(s) for the incomplete and details the specific obligations the student must meet to change the incomplete to a letter grade. The

date by which the student agrees to complete required work must appear in the contract. The Dean, the instructor, and the student receive signed copies of the Incomplete Grade Completion Contract.

Even if the student does not attend Peru State College, all incomplete course work must be finished by the end of the subsequent semester. Unless the appropriate Dean approves an extension and if the student does not fulfill contract obligations in the allotted time, the incomplete grade automatically becomes an F.

College's Academic Integrity Policy

The College expects all students to conduct themselves in a manner that supports an honest assessment of student learning outcomes and the assignment of grades that appropriately reflect student performance. It is ultimately the student's responsibility to understand and comply with instructions regarding the completion of assignments, exams, and other academic activities. At a minimum, students should assume that at each assessment opportunity they are expected to do their own original academic work and/or clearly acknowledge in an appropriate fashion the intellectual work of others, when such contributions are allowed. Students helping others to circumvent honest assessments of learning outcomes, or who fail to report instances of academic dishonesty, are also subject to the sanctions defined in this policy.

Instances of academic dishonesty may be discovered in a variety of ways. Faculty members who assign written work ordinarily check citations for accuracy, run data base and online checks, and/or may simply recognize familiar passages that are not cited. They may observe students in the act of cheating or may become aware of instances of cheating from the statements of others. All persons who observe or otherwise know about instances of cheating are expected to report such instances to the proper instructor or Dean.

In order to promote academic integrity, the College subscribes to an electronic service to review papers for the appropriate citations and originality. Key elements of submitted papers are stored electronically in a limited access database and thus become a permanent part of the material to which future submissions are compared. Submission of an application and continued enrollment signifies your permission for this use of your written work.

NSCS Board of Trustees Policy 4220 states that each College “. . . will establish a distance learning assessment policy that will include, at a minimum, a substantial culminating experience that is proctored.” Peru State College's policy is that each course that is offered entirely online will feature a proctored final exam that substantially measures the extent the course's stated learning objectives are achieved. Courses which feature graded site-based activities (e.g., teaching demonstrations) and/or video-taped presentations that occur near the end of the term, and that are designed to substantially assess the achievement of learning objectives, can be considered in compliance with this policy. Project-based capstone and graduate courses utilizing real-time discussions held by web-cam, phone or in person with the faculty member as part of the assessment process can also be considered in compliance with this policy.

Should an occurrence of academic misconduct occur, the faculty member may assign a failing grade for the assignment or a failing grade for the course. Each incident of academic misconduct should be reported to the Dean and the Vice President for Academic Affairs (VPAA). The VPAA may suspend students for two semesters found to be responsible for multiple instances of academic dishonesty. The reason for the suspension will be noted on the student's transcript.

A faculty member need present only basic evidence of academic dishonesty. There is no requirement for proof of intent. Students are responsible for understanding these tenets of

academic honesty and integrity. Students may appeal penalties for academic dishonesty using the process established for grades appeals.

Title IX Compliance Notice

Peru State College is an equal opportunity institution. PSC does not discriminate against any student, employee or applicant on the basis of race, color, national origin, sex, disability, religion, or age in employment and education opportunities, including but not limited to admission decisions. The College has designated an individual to coordinate the College's nondiscrimination efforts to comply with regulations implementing Title VI, VII, IX, and Section 504. Inquiries regarding non-discrimination policies and practices may be directed to Eulanda Cade, Director of Human Resources, Title VI, VII, IX Compliance Coordinator, Peru State College, PO Box 10, Peru, NE 68421-0010, (402) 872-2230.

Students requesting reasonable accommodation and tutoring services should contact the Center for Achievement and Transition Services (CATS).