



**Course Number:** CHEM102 **Spring 2012**  
**Course Title:** General Chemistry  
**Credit Hours:** 5 Hours including lecture, laboratory, and recitation

Note: You must be registered for recitation time and laboratory time on same day.

**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

**Phone:** 872-2208

**E-mail:** dwelsh@peru.edu

**Web Page:** Natural Science web page at [www.peru.edu](http://www.peru.edu) or complete address  
[www.hpcnet.org/peru/schoolartsandscience/naturalscience/faculty/welsh](http://www.hpcnet.org/peru/schoolartsandscience/naturalscience/faculty/welsh)

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### Course Description:

Chemistry 102 is the second semester of fundamentals of chemistry, with an emphasis on inorganic chemistry. This is a 5 hour course which meets for 3 hours lecture, 2 hours of lab, and 1 hour of recitation each week.

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:

CHEM 101 (PSC grade of D or above required, grade of **C or above highly recommended**)  
(Transfer students must have grade of C or above in equivalent course)

### Required Materials:

Brown, LeMay & Bursten, *Chemistry the Central Science* (12<sup>th</sup> edition)

Laboratory Manual: G.R. Hered, *Basic Laboratory Studies in General Chemistry* (10<sup>th</sup> edition)

Mastering General Chemistry Student Access Kit

Calculator: Every student should have a calculator for homework, labwork and exams. Hand held calculators may be used, but not shared, for computational purposes in taking examinations. Portable personal computers, PDA's, and cell phones may not be used during any class time.

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 basic understanding of fundamental chemical principles
- 2) established a firm basis for subsequent chemistry classes
- 3) learned basic chemical laboratory skills and techniques
- 4) learned basic understanding of graphing and computer graphing
- 5) developed an appreciation of chemistry and its effects on our world and society.

**Assessment Method:**

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

Lecture Exams & Quizzes	= 400 pts
Final Exam	= 150 pts
Homework (via Mastering General Chem.)	= 100 pts
Laboratories	= 280 pts
Laboratory Exam	= 40 pts
Hurdles*	= 120 pts
<u>Instructor evaluation</u>	= 10 pts
	1100 pts

**\*Hurdles**

**Hurdles are evaluations designed to test your ability to complete basic chemistry tasks. Each hurdle will have a value of 40 pts. You will be evaluated with one (at most two) questions on the hurdle topic. If you answer the question(s) correctly you have passed the hurdle and will receive all points possible. Partial credit will not be awarded. You will be allowed to attempt the hurdle three times. Each time you re-attempt a hurdle the possible point values decrease as shown below:**

**1<sup>st</sup> attempt = 40 pts**

**2<sup>nd</sup> attempt = 35 pts**

**3<sup>rd</sup> attempt = 29 pts**

**Grading Scale:**

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

**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.

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.

**Permission to be excused from an examination will be given only in cases involving extreme or extraordinary circumstances.**

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.

**Cell Phone Policy:**

Disruptions will significantly lower everyone's ability to succeed in this course. Therefore, cell phones and like devices should be turned off or may be kept on silent or vibrate mode during class. Do not text message or answer calls while in lecture, recitation, and laboratory. The cell phone calculator cannot be used during testing or lab sessions. Your final course grade will be docked 1% for each issue that arises.

### Tentative Class Schedule

Jan 23	Quiz # 1 (Chapter 2.8)	(40 pts)
<b>Hurdle #1 (Names &amp; Solution Prep.)</b>		
Jan 30	1 <sup>st</sup> attempt	(40 pts)
Feb 1	2 <sup>nd</sup> attempt (if required)	(34 pts max)
Feb 6	3 <sup>rd</sup> attempt (if required)	(28 pts max)
Feb 6	Exam # 1 (Chapters 4.4 – 4.6 & 16.1 – 16.6)	(100 pts)
Feb 27	Exam # 2 (Chapter 5)	(100 pts)
<b>Hurdle #2 (Stoichiometry)</b>		
Mar 12	1 <sup>st</sup> attempt	(40 pts)
Mar 14	2 <sup>nd</sup> attempt (if required)	(34 pts max)
Mar 19	3 <sup>rd</sup> attempt (if required)	(28 pts max)
Mar 28	Exam # 3 (Chapter 10)	(100 pts)
Apr 18	Exam # 4 (Chapters 8 & 9.1 – 9.6)	(60 pts)
<b>Hurdle #3 (General Chemistry Knowledge)</b>		
Apr 23	1 <sup>st</sup> attempt	(40 pts)
Apr 25	2 <sup>nd</sup> attempt	(34 pts max)
Apr 30	3 <sup>rd</sup> attempt	(28 pts max)
	Final Exam (Accumulative with Chapters 14 & 21)	(150 pts)

### Tentative Laboratory Schedule

Jan 11	Check In & Introduction to Naming
Jan 18	Determining Limiting Reagent (Special experiment)
Jan 25	Graphing & Computer Graphing of previous lab.
Feb 1	The Colors of Gatorade (Special experiment)
Feb 8	Activities of Metals (Special experiment)
Feb 15	Determining the conc. of Citric acid in 7-UP (special experiment)
Feb 22	Cost/Marketing of Chemical Product – Discussion (special experiment)
Feb 29	Cost/Marketing of Chemical Product – Part I (special experiment)
Mar 14	Cost/Marketing/analysis of Chemical Product – Part II (special experiment)
Mar 21	Chemistry for Life
Mar 28	Determination of Hard Water (special experiment)
Apr 4	Egg Lab #2 (Special experiment) & Make-up week
Apr 11	Boyle's & Charles Laws (Special experiment)
Apr 18	Smoking Lab #2
Apr 25	Characterization of Compounds from Chem.(Notebook #23) & Lab Exam

## **- Laboratory Information Continued -**

You are expected to come to the laboratory section prepared. There are pre-laboratory questions in the lab manual; they should be completed before you come to the lab. Pre-laboratory questions may or may not be graded; if not graded a equivalent point quiz will be given during the recitation period before each lab. Doing the pre-laboratory questions and understanding the laboratory procedure will prepare you for this quiz.

The laboratory assignments will be due at the end of the laboratory period. Some laboratories will require extensive calculation and extra time will be given to turn in such labs. This will be announced in the laboratory class. Keep all returned lab reports and bring them with you to all classes. Approximately 20% of the questions on lecture exams will be material covered in the laboratory section.

You will be allowed one absence in the laboratory for the semester. The missed lab must be completed on the Make-Up Week (March 28). The instructor must be informed of your necessity to conduct a make-up lab by March 21. If a second lab period is missed you will not be allowed to make up that lab you will receive a zero score. No absences in the laboratory periods after March 28 or the Cost/Marketing of Chemical Product will be allowed.

### **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).