

Indiana Academy - General Chemistry 2021 - 2022

Chris Norton

Office info: EL009 765-285-7456

email: ccnorton@bsu.edu

- It is very important to me to respond to your questions or concerns promptly; however, please note that I do receive *a lot* of emails. If for some reason I do not respond within 24 hours, please resend your original email and/or leave me a voicemail message (765-285-7456).
- Please note that if you email me after midnight, it is highly unlikely that I will read that email until sometime the following morning.

Meeting Times:

- **10:00- 10:55 MWF Room: Burris 210**
- Lab: Tuesday 2 – 4

Office hours – Note: I can also meet by appointment.

- Monday: My office: 8 a.m. – 10 a.m.
- Wednesday: My office: 4 p.m. – 6 p.m.
- Thursday: Burris 210: 8 a.m. – 11 a.m.
- Friday: My office: 8 a.m. – 10 a.m.

Introduction

This course is an **introductory** course to chemistry which will cover many different topics in chemistry. Most of the chapters in this course, excluding chapters one through six, could be turned into a full course of their own! General Chemistry examines the concepts of the structure of matter, the states of matter, chemical bonding and reaction types, stoichiometry, equilibrium, acid-base theory, kinetics, thermodynamics, oxidation-reduction, and an introduction to organic chemistry. The course emphasizes chemical calculations and the mathematical formulation of principles. Laboratory work emphasizes both qualitative and quantitative experiences and introduces the use of technology in the lab.

* Ball State University offers 3 college credit hours in CHEM 100 to students who complete this course. The course is classified as a spring course.

Textbook

World of Chemistry, 3rd Edition, Zumdahl and Zumdahl

Philosophy

Learning is NOT a spectator sport. The ultimate responsibility for success in learning lies with you, the student. Learning is a process by which a person seeks to make sense out of the world. The view of the world or any part of it, held by a person is as individual as fingerprints. The only way we are able to share knowledge is by verbal and written communication. The quality of the communication depends on the quality of the

language used. A teacher is a facilitator for learning. The teacher structures experiences which provide the maximum probability that students can make sense out of the material presented.

Role of the Teacher

My responsibility is to present experiences that will assist you to make sense out of chemistry. These experiences can be altered, based on your input, to improve your chances of being successful. It is imperative that communications are two ways so that we can remain informed about how you view the concepts we are studying.

It is also my responsibility to design tests, quizzes, and lab assessments that fairly evaluate the level of your success. You have the right to know where you stand at all times during the semester and to ask when you do not understand why you were evaluated in a particular manner.

Your Role

You are in control of your success in chemistry. To some extent your success will be a function of your background, but the major factor in your success will be the quality and quantity of time and effort you put into your studies. You must keep in mind that 1) your principal job at this stage in your life is to be a student; and 2) chemistry is not the only course you are taking. You must balance your time such that you maximize success in all courses. I will provide several vehicles to assist you. You must elect to use them.

Before you get too far into the semester, you need to *sincerely evaluate your outside commitments and other courses to determine if you have the time needed to put into this course.*

Academic Integrity

Academic integrity is essential to the mission of the Academy. All students deserve a healthy learning environment and evaluations that are based on their honest independent efforts. A clear sense of academic honesty and responsibility is fundamental to good scholarship and learning.

You are encouraged to *form study groups and to problem-solve together*. The normal expectation is that the work on exams is your own and that homework, take-home quizzes, and lab reports, while discussed with other students, is of your own creation. Academic dishonesty will not be tolerated. Please refer to the student handbook.

Examples of dishonesty include sharing your work with another student either electronically or on paper (including labs!), using another student's work to complete your work, and copying answers from the Internet or from the solution manual. You may use resources to help complete your work; you may not directly use another's work.

Late Work

- Late work will not be accepted.

Office Hours

Wednesday: My office: 4 p.m. – 6 p.m.

Thursday: Burris 210: 8 p.m. – 1 p.m.

Friday: My office: 8 a.m. – 10: a.m.

I can also meet by appointment.

Quizzes

- If you miss a quiz, **you** must schedule a time with me to take the quiz no later than three days following the missed quiz (this includes the weekend) or you will earn a zero on the quiz.

Polyatomic Ion Quizzes

Every **Wednesday** you will have a polyatomic ion quiz that will contain a mix of the symbol and the terms. You will have five minutes to complete this quiz

An opportunity to earn bonus points!

- If you earn between 90 – 99% you are in the “cushion zone.”
 - For example, say on the following week you earn less than 90%, your new score will be calculated as follows:

$$x = \text{score you earned the previous week}$$

$$y = \text{score you earned this week}$$

$$z = \text{new score}$$

$$x - [(100 - y)0.10] = z$$

- If your score is still in the cushion zone, and then the following week you again earn less than 90%, your new score will be calculated as follows:

$$z = \text{calculated score from previous week}$$

$$y = \text{score you earned this week}$$

$$z - [(100 - y)0.20] = \text{new score}$$

- Each successive week that your score is below 90%, the percentage will increase by 10%, until you are out of the cushion zone.
- If you earn consecutive 100's, then each week 10% will be added.
 - If you have bonus points, and you earn less than 90% on the following quiz your score will be calculated as follows:
 - The first time will work the same as above
 - The second time will deduct the raw difference between 100 and the score you earned.

Chapter Quizzes

At the end of each chapter, there will be Chapter Quiz.

Attendance/Tardies

It is extremely important that you attend ***all*** class periods. Missing a day can seriously put you behind in this course; however, I do understand that absences happen. Please adhere to the following guidelines in the event you miss a class.

- If you are absent for a school scheduled event such as a field trip or a college trip, you are required to turn in your work ***prior*** to the trip *unless* alternate arrangements have been made with me ***prior*** to your trip.
- If you have an excused absence,
 - the work that was due on the day of your absence is expected the day you return
 - work that is due the day you return is expected the following class period
- Extended excused absences require that *you* generate a conversation with me *outside* of class so that we can work out a plan to get you caught up.
- Tardy is defined as arriving after class has started. After ten minutes, a tardy will be counted as absent.
- Sleeping in class – first offense will result in a warning, the second offense will result in an unexcused absence.
- No work will be accepted for an unexcused absence.

Cell phones/Computers/Tablets/Calculators

- Cells phones are not to be used in class.
 - Emergency calls can be taken in the hallway
 - During a test or quiz, cell phones must be put on silent, airplane mode, or turned off.
- Computers and/or tablets may be used in class for taking notes.
 - If you are using a computer/tablet during class for anything outside of the scheduled activity/lecture, you will lose the privilege to use these devices during class.
- Occasionally you will need your computer for a lab – you will be given notice when you will need a computer for lab.
- A TI-84 calculator (or equivalent) will be helpful for this class

Laboratory

Many of the labs that you will do in class are inquiry based labs. *Labs make up 20% of your overall grade.* If you miss a lab (and it is an excused absence) then you will be required to make up the lab within six days of the missed lab; however, the due date will not change. You will not be allowed to simply use the data from your lab partner. Learning laboratory techniques is just as important as learning the concepts behind the labs.

- Lab work cannot not be made up for an unexcused absence.
- Sign and return the lab safety contract.

The prelab is extraordinarily important and you must be prepared to do the lab when you come to class. The prelab is on Canvas and you are expected to work as a group to complete the prelab. Failure to complete the prelab will be an automatic deduction of 50% from your lab assignment.

Exams

There will be four exams over the semester plus one final exam. The exams will cover more than one chapter. You will be able to use a calculator, a formula sheet, a periodic table, and a polyatomic ion list. *Exams make up 50% of your overall grade.* Use your Chapter Quizzes and class notes as a study guide.

BSU Statement

“Ball State University aspires to be a university that attracts and retains a diverse faculty, staff, and student body. We are committed to ensuring that all members of the community are welcome, through valuing the various experiences and worldviews represented at Ball State and among those we serve. We promote a culture of respect and civil discourse as expressed in our Beneficence Pledge and through university resources found at<http://cms.bsu.edu/campuslife/multiculturalcenter>.”

Mask Policy

The Indiana Academy will follow [Ball State University's mask policy](#) (see Section IV). Based on current CDC guidance recommending the wearing of face masks for all people—regardless of vaccination status—in public indoor settings in communities where the rate of coronavirus transmission is high or substantial, all employees, students, and campus visitors are required to wear a mask while inside any University building. This requirement is effective on August 9, 2021. Fully vaccinated people are not required to wear masks outdoors.

Individuals who are not fully vaccinated for COVID-19 are required to wear face masks while inside campus buildings and outside when physical distancing cannot be maintained.

If a student declines to wear a face mask as required, the student will be referred to the Director of Academic Affairs or the Director of Residential Affairs. If the situation occurs in a classroom or other academic setting, it is considered a classroom management issue, and the teacher will remind the student of the requirement and give the student a chance to comply with it prior to referring the matter to the Director of Academic Affairs or the Director of Residential Affairs. Wearing masks is crucial to preventing the spread of COVID-19 to others.

Grade Weights

Weight	Description
45%	Exams
20%	Laboratory
15%	Quizzes
10%	Homework
10%	Final Exam
100%	Total

Grade Scale

Percentage	Letter Grade
≥93	A
90 - 92	A-
87 - 89	B+
83 – 86	B
80 – 82	B-
79 – 77	C+
70 - 76	C
65 - 69	C-
<64	D*

Test Taking Tips

Use the 3-Pass System:

1. Answer the questions that you know.
Then...
2. Answer the stuff that you think you know.
Then...
3. Finish what you can

Study Tips

1. Ask questions!
2. Rewrite your class notes with the textbook.
Synthesize the two into one coherent document.
3. Ask questions!
4. Attend the help sessions.
5. Ask questions!
6. Form a study group.
7. Ask questions!

Additional Resources

<http://www.khanacademy.org/science/chemistry>

Video lessons! Everything you need to know about chemistry. If you search, you can find just about any topic including Calculus and History.

<http://misterguch.brinkster.net/helpdesk2.html>

Fairly basic, but the information is very helpful.

<http://www.csudh.edu/oliver/demos/index.htm>

Good videos on lab techniques

<http://etc.usf.edu/clipart/index.htm>

More video lessons both in chemistry and biology

<http://www2.stetson.edu/mahjongchem/>

Chemistry mahjong – well, why not?

<http://quizlet.com/7300659/element-flashcards-flash-cards/>

Element flashcards

Lecture Schedule Semester 1

Chapter 3 – Chemical Foundations: Elements, Atoms, and Ions

Chapter 4 – Nomenclature

Exam #1

Chapter 5 – Measurements and Calculations

Chapter 6 – Chemical Composition

Exam #2

Chapter 7 – Chemical Reactions

Chapter 9 – Chemical Quantities

Exam #3

Chapter 8 – Reactions in Aqueous Solutions

Chapter 15 – Solutions

Chapter 16 – Acids and Bases

Exam #4

Final Exam