Syllabus for CHEMISTRY 111 Class – Sections 21, 22, 23, 24 (PAVLIK)
Ball State University, Fall 2025

Lectures: Tues. & Thur. 12:30 PM – 1:45 PM in FB-340

Instructor: Dr. Jeffrey W. Pavlik Office: FB-322

Phone: 765-285-8068 E-mail: jwpavlik@bsu.edu

Drop-in Office Hours: Mon. & Wed. 1:30 PM – 3:00 PM

Appointments: -Virtual or in-person. Please request by e-mail and wait for confirmation, I will work with your schedule.
-Best appointment times: Mon. & Wed. 10:00 AM–Noon, 3:00PM-5:00PM

Grading Scale:

850 – 786 points	A	100 – 93 %
785 – 761 points	A-	92 – 90 %
760 – 735 points	B+	89 – 87 %
734 – 701 points	B	86 – 83 %
700 – 676 points	B-	82 – 80 %
675 – 650 points	C+	79 – 77 %
649 – 608 points	C	76 – 73 %
607 – 591 points	C-	72 – 70 %
590 – 565 points	D+	69 – 67 %
564 – 523 points	D	66 – 63 %
522 – 506 points	D-	62 – 60 %
505 – 0 points	F	59 – 0 %

Your CHEM 111 Score Tally Sheet:

Item	**Points Earned**	**Points Possible**
Quiz 1 ______ Quiz 2 ______ Quiz 3 ______ Quiz 4 ______ Quiz 5 ______ Sum of best four quizzes →		100
Exam 1		100
Exam 2		100
Exam 3		100
ALEKS		60
Paper homework 13×5 pts. ea.		65
Attendance		20
In-Class Work		25
Completed Notes		30
Final Exam		150
Lab % × 100		100
Grand Sum		**850**

Required Items

1. *ALEKS 360 access code for online homework (synced with Chemistry, 15th Edition, Chang & Overby, McGraw-Hill, 2025, ISBN 13: 8220142552843). Gives access to digital textbook (included with access code purchase) and information about looseleaf textbook purchase (optional). Digital textbook available once logged in to ALEKS.

   IMPORTANT NOTE: Do not open course materials until you are certain of course continuance; if in doubt of course continuance, free 2-week trial access can be used.

2. *111 Lab Manual, 8th Edition, Van-Griner, 2024 (ISBN 13: 9781645654766).

   ***These items are included in the First Day books program, If you are using BSU First Day, please also see the separate handout "111-1st-day-info".**

3. Calculator: TI-30X SERIES scientific calculator: **THIS IS THE ONLY CALCULATOR TYPE ALLOWED FOR USE ON EXAMS AND QUIZZES.**

4. Spiral or loose-leaf notebook for by-hand note taking (highly recommended).

5. Knee-length lab coat. To better ensure compliance, purchase from BSU bookstores. Further details will be supplied in the first laboratory session.

6. UVEX Classic Safety Goggles ***OR*** UVEX Stealth Goggle Hydroshield.

7. About forty 3″×5″ notecards for attendance quiz, one for each non-quiz, non-exam day. Absolutely must be **3″×5″** note cards!

Examinations:
The three midterm examinations and the final exam will be held in room FB-340 on the dates and times shown below. The chapter coverage of the midterm exams is approximate.

Exam Dates:

Exam 1 (100 pts): Thur. Sept. 18, 12:30 PM, Ch. 1,2,3

Exam 2 (100 pts): Thur. Oct. 16, 12:30 PM, Ch. 4,7,8

Exam 3 (100 pts): Thur. Nov. 13, 12:30 PM, Ch. 9,10

Final Exam (150 pts): Tues. Dec. 9, 12:00 Noon, Ch. 1-10

Exam/Quiz Policy:
Questions will focus on fundamental concepts and problem-solving skills. You should focus your exam and quiz studies on the lecture notes, in-class example problems, exam-prep worksheets, and paper homework. Exams and quizzes will consist of short answer questions, problem solving and some recall. Exams and quizzes will be graded by myself and a small group of trained graders under my direct supervision.

1. To earn any partial credit, **YOU MUST SHOW ALL OF YOUR WORK**! To clarify, this means that all steps of problems must be shown. Final answers without any work shown may receive minimal or no credit.
2. Electronic devices are to be kept in backpacks or face-down on desk during exams/quizzes.
3. Point deductions may be made if short answer responses are not made in the form of sentences.
4. **THERE WILL BE NO MAKE-UP EXAMINATIONS OR QUIZZES.**
5. Known conflicts (i.e. school related activities and religious holy day observations) must be handled in advance. In these cases you must inform the professor and receive confirmation two weeks before the scheduled exam or quiz so alternate plans can be made.
6. Unexcused-missed* exams and quizzes will receive a grade of zero.
7. If you have two or more unexcused absences on midterm exam days, then you will receive an **F** for the course.
8. The final exam is MANDATORY. If you do not take the final exam, you will receive an **F** in the course, regardless of your point total.

*If you miss an examination or quiz for a valid verified reason (i.e. emergency medical issues, death in the family), the absence may be considered excused. For an absence to be considered excused, you must notify me as soon as possible by e-mail and provide valid documentation of the reason within one week of the missed exam or quiz. Alternate plans for the missed quiz or exam will be completely at my discretion and must be discussed in person. Make an appointment to see me!

Ball State Canvas:
The Ball State Canvas website will be used extensively in this class. It can be accessed with your Ball State username and password. You may access Canvas at https://www.bsu.edu/gateways/current-students
Typical postings include the following:

- General Announcements.
- Course Notes Templates
- Homework Assignments
- Lists of test and quiz content coverage.
- Answer keys to selected items.
- Grade Posting.

***ALEKS* Homework:** The *ALEKS* online homework system will be used to supplement paper homework. Questions will be primarily conceptual in nature as extensive calculations are better suited for paper homework. *ALEKS* homework assignments will be due on the Thursday a week prior to each semester exam, and the Thursday the week before the final exam. Assignments will cover 2-3 chapters. It will be highly beneficial for students to complete portions of assignments related to lecture work close-in-time to when covered in the lecture. The achieved percentage grade in *ALEKS* for each due date will be multiplied by 15 to determine the number of course points achieved. There are four *ALEKS* due dates so the total of course points from *ALEKS* assignments is 60.

Paper Homework:
Approx. 13 *graded* paper homework assignments (PHW) will be given through Canvas or in class. These assignments must be completed by hand (handwritten either with pencil/pen or stylus if write-over .pdf) on printout or pdf, then scanned/uploaded to your Chem. 111 Canvas page in the specified portal by the specified date and time. Late homework is subject to point deductions at the instructor's discretion. A number of *self-graded* printable homework assignments (SHW) will be assigned. *Self-graded* assignments are just as important as the graded assignments, although SHWs will not be collected, every effort should be made to complete them before the relevant upcoming tests and quizzes.

In-class Work:
On certain days, a good portion of the class period will be used for extra examples, enrichment assignments and general help time on homework. On these days, some or all of the work will be required to be submitted on-paper (2-5 pts each; 25 pts total for semester). Unexcused absences on these days will generally result in forfeiting those points. If late in the semester the point total for in-class work is projected to be less than 25 pts, additional required homework may be assigned to achieve the remainder of points.

Grade Finalization Policy:
Students are responsible for checking the consistency of their posted grades. **GRADES ARE FINAL TWO WEEKS AFTER POSTING.** If a student has concerns with any grading, this must be discussed during an appointment with the professor within two weeks of posting. After that time, changes will not be made.

Quizzes:
There will be five quizzes (25 pts each) given throughout the semester, over material covered in class and homework assignments. The material covered on a given quiz will be clearly indicated in class and on Canvas at least one day prior to quiz. Your lowest quiz score will be dropped, so a total of 100 points is possible for quizzes. Quizzes will normally be in-class, however if circumstances dictate, online format may be used outside of class meeting times.

Attendance:
Attendance will be taken by short quiz every lecture day for which no exam or 30-point quiz is scheduled. After you have officially attended 20 non-exam days, 2 extra-credit points will be awarded for each subsequent day officially attended. A total of about 12 extra-credit points are thus possible. After the first week, this will be the only opportunity for extra credit. Please do not ask for further extra credit.

CHEM 111L Lab
You are required to attend all scheduled laboratory sessions and complete all pre–lab exercises and lab reports. The Laboratory portion of the course is worth up to 100 points toward your final CHEM 111 course grade. Additionally **YOU MUST RECEIVE A SCORE OF 75% OR GREATER IN THE CHEM 111L LAB OR YOU WILL RECEIVE A LETTER GRADE OF "F" IN THE CHEM 111 COURSE.** The lab portion of your course score is determined by multiplying your percentage of lab points obtained by 100.

Lecture Format and Note Taking:
Course notes will be delivered by document projection or projected via tablet. The course will be portioned into about 30 sets of notes denoted as "lessons", each roughly 3-6 pages in length. The note templates will be accessible on Canvas, usually no later than 18 hours before class. **Arriving with a printed or pdf copy of the note templates is mandatory**. Completed or "filled-in" notes must be uploaded to your Chem. 111 Canvas page in the specified portal for points to be earned. Extra examples will be done on board or by doc-cam. You are responsible for copying down all notes and problem solutions as they are performed. Some sets of notes (lessons) and extra examples may be delivered by video, to be completed by students outside of class. This may be to ensure coverage of all topics prior to a test or quiz, or to allow for in-class assignments, extra examples or special interest topics.

Notes delivered by video are just as important towards exam/quiz items as the ones delivered in class, and need to be filled in as the videos are watched. Scanned images of the filled-in notes from these video-delivered selections will be submitted to Canvas by specified strict due dates.

Learning Objectives

Upon completion of the course, students will be able to:

1. Differentiate materials as substances, compounds and mixtures and also between states of matter.

2. Demonstrate a spatial and quantitative understanding of atomic structure.

3. Interconvert between names and formulas of simple compounds, acids and bases.

4. Perform mathematical manipulations such as unit analysis with proper attention to units and significant figures.

5. Demonstrate an understanding of the mole concept and perform related stoichiometric calculations.

6. Categorize reactions single replacement, double replacement, decomposition, synthesis, combustion and acid-base neutralization.

7. Write and balance chemical equations based on written descriptions of the reaction.

8. Perform stoichiometry calculations involving amounts of products and reactants.

9. Calculate and utilize solution concentration units such as molarity.

10. Use and understand the gas laws, ideal, Boyle's, Charles's, Gay-Lussac's and the combined gas law.

11. Write and interpret electron configurations of elements and ions, and relate them to quantum numbers.

12. Explain periodic trends based on atomic structure and electron configurations.

13. Differentiate between types of chemical bonds and be able to construct and interpret Lewis structures.

14. Convert Lewis structures of simple molecules to VSEPR molecular shapes.

Academic Integrity:
Academic misconduct will not be tolerated under any circumstances. In all instances of cheating, the harshest penalties available will be pursued. Please read the Code of Student Conduct in the Code of Student Rights and Responsibilities. If you do not have a copy, please access it online at:

https://www.bsu.edu/about/administrativeoffices/student-conduct/policiesandprocedures

For information about academic integrity, please follow the link:

https://www.bsu.edu/about/administrativeoffices/vice-provost/student-services/academic-integrity

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Diversity Statement:
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. If you need course adaptations or accommodations because of a disability, please contact the instructor of record as soon as possible. Ball State's Disability Services office coordinates services for students with disabilities; documentation of a disability needs to be on file in that office before any accommodations can be provided. *Disability Services* can be contacted at 765-285-5293 or ***dsd@bsu.edu***. We promote a culture of respect and civil discourse as expressed in our *Beneficence Pledge* and through university resources found *here*.

Sensitive Medical Conditions:
Students enrolling in this course will be working with a variety of chemicals, some of which could be irritating or hazardous. Proper and accepted good laboratory practice will always be utilized to minimize or eliminate any adverse contact. However, individuals with sensitive medical conditions (including pregnancy) should take precautions such as wearing additional protective garments, delaying enrollment, or not enrolling in this course. Information about how to obtain Material Safety Data Sheets (MSDS) for chemicals used in this course is available in the Chemistry department office, FB-417. Please consult with your instructor and health care professional if you have any concerns.

Use of Electronic Devices:

The only electronic devices allowed are tablets that lie flat on desks. Cell phones and laptop computers should not be taken out in class. For certain special circumstances, permission to use restricted devices might be granted by instructor upon request. If you need to use a special device due to a handicap, please let me know ASAP.

AI statement: The use of AI is prohibited on tests and quizzes and strongly discouraged in all other situations. Problems on homework must show work and be handwritten as presented in examples. If AI was used to check answers, please be aware that AI can be inaccurate and that it may follow some formatting conventions, different than what is expected for the course.
