SYLLABUS FOR GENERAL CHEMISTRY I – CHEM 1031

Course Descriptions, Pre- and Co-Requisites: The first semester of chemistry for science majors, pre-professional students, and others in science related fields. A quantitative introduction to atomic and molecular structure, states of matter, basic thermodynamics, and solutions. Three hours of lecture and one hour of recitation per week. Prerequisite: Placement into Mathematics 1022, Mathematics 1021 with a grade of C or better, or equivalent transfer. Co-Requisite: Chemistry 1033 is normally taken concurrently. Students must earn a grade of C- in this course or higher before enrolling in CHEM 1032.

Meeting Times
MWF 8:00-8:50
Room BE 160
Instructor Dr. Jim Bloxton
Office BE 444
Ext 1-2385
Email jdb84@temple.edu

Office Hours: M 11 - 1; T 3 - 4; W 2 – 3; Th 3 - 4; and F 10 – 11, and also by appointment.

Lab Coordinator: Dr. John B. Michel’s office is in BE 126B. Dr. Michel is usually around in office or labs 103, 109, 117, or 125 on Monday through Thursday, 9 - 1:00 PM and Friday: usually 9 - 1:00 PM. Dr. Michel is the person to see regarding questions and scheduling in the lab course, CHEM 1033, which is a separate course.

Recitations: Below is the schedule for meeting times and rooms (all in Beury). You should be enrolled in one of these sections. Please remember your section number. Recitations will meet starting the first week of the semester on Monday, January 13th. Your TA’s office hours will be posted on Canvas.

<table>
<thead>
<tr>
<th>Sec #</th>
<th>Day and Time</th>
<th>Room</th>
<th>CRN</th>
<th>Teaching Assistant</th>
<th>Office Hours in BE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mon 9:00-9:50</td>
<td>119</td>
<td>1951</td>
<td>Ning</td>
<td>TBA by TA</td>
</tr>
<tr>
<td>2</td>
<td>Tue 1:00-1:50</td>
<td>120</td>
<td>1168</td>
<td>Maloney</td>
<td>TBA by TA</td>
</tr>
<tr>
<td>3</td>
<td>Wed 10:00-10:50</td>
<td>120</td>
<td>1169</td>
<td>Maloney</td>
<td>TBA by TA</td>
</tr>
<tr>
<td>4</td>
<td>Thur 2:00-2:50</td>
<td>120</td>
<td>1170</td>
<td>Maloney</td>
<td>TBA by TA</td>
</tr>
<tr>
<td>5</td>
<td>Fri 10:00-10:50</td>
<td>121</td>
<td>1171</td>
<td>Maloney</td>
<td>TBA by TA</td>
</tr>
<tr>
<td>11</td>
<td>Mon 10:00-10:50</td>
<td>119</td>
<td>6773</td>
<td>Maloney</td>
<td>TBA by TA</td>
</tr>
<tr>
<td>13</td>
<td>Tue 12:00-12:50</td>
<td>119</td>
<td>29647</td>
<td>Lunt</td>
<td>TBA by TA</td>
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<tr>
<td>14</td>
<td>Wed 11:00-11:50</td>
<td>415</td>
<td>1172</td>
<td>Maloney</td>
<td>TBA by TA</td>
</tr>
</tbody>
</table>

Drop/Add: During the first two weeks of the semester students may only register for open Lec/Rec sections with permission from the lecturer. The last day to drop a course without a record of the class appearing on the transcript is Monday, January 27th.
Withdrawal: In weeks three through eight of the semester, a student may withdraw only with their advisor’s permission. This is Temple University’s Policy (#02.10.14). There is no need to seek an instructor’s signature. The course will be recorded on the transcript with the notation of “W,” indicating that the student withdrew. A student may withdraw from no more than five courses during their undergraduate career. A student may not withdraw from the same course more than
once. After week eight, students may not withdraw from courses and will receive a letter grade. The last day to withdraw from a course is **Wednesday, March 19th**.

**Incomplete(s):** An incomplete, or “I”, will only be given in accord with Temple University’s Policy (#03.12.13). An “I” cannot be assigned until the specific requirements have been met and the **Agreement for Issuing an Incomplete** form has been signed and submitted by the instructor and the student prior to submitting the form to the Dean’s Office or Dean’s Designee for final approval. To obtain an “I”, at least 50% of the work for the course must be completed, a student’s accumulated point total must be more than 75% of the total number of possible points, and there must be a valid reason acceptable to academic advising. For students who are assigned a grade of “I”, all previous scores will stand and will be used in the calculation of the final score when the course is completed. No “I” designation may be requested after the final exams for these two courses have been administered.

**Attendance and Make-up:** Students are expected to attend all lectures and recitations, to arrive on time, and to remain for the entire class. Cell phones should be switched off during lectures and recitations. If you choose to spend class time texting, looking at your social media, or watching cat videos, etc., then you should consider withdrawing from the course and find a different vocation that interests you. It is the student’s responsibility to note any announced schedule changes and their implications to graded work.

**Make-up Exams:** Make-up exams will be offered only if compelling and written documentation is provided. The student must meet with me, ideally within 24 hours, and I will then decide if a make-up exam is justified. The make-up exam will be given 1 or 2 days after the regularly scheduled exam at a time and place determined by the instructor.

**Recitations:** Recitations will meet starting the first week of the semester, starting on **Monday, January 13th**. Students are required to attend their registered recitation section at the scheduled time. Students are encouraged to ask questions, important lecture topics are reviewed, and small group work will be assigned.

**Inclement Weather:** The most accurate and up-to-date information can be obtained directly from the University (215-204-1975; WRTI, 90.1 FM; or [http://www.temple.edu](http://www.temple.edu)). In the event of a cancellation, it should be assumed that any exams or graded work will be due at the next class meeting unless otherwise stated.

**Course Materials:** This course will require a subscription to [Cengage Unlimited](https://www.cengage.com/) which includes access to the interactive e-books: **General Chemistry** (1st edition) by Vining et al. (using MindTap) and **Chemistry and Chemical Reactivity** (10th edition) by Kotz et al. You will also have access to MindTap Labs with your unlimited purchase which you need for both semesters of Chemistry Lab (CHEM 1033 and CHEM 1034).

Cengage Unlimited is a digital subscription service which can save you a lot of money. With Cengage Unlimited you can access any Cengage materials you are using across all of your courses and a library of 20,000 e-books, study guides and reference materials. The majority of students in this course will also be taking Pre-Calculus (MATH 1022), Calculus I (MATH 1041) or Calculus II (MATH 1042); all three courses are using Cengage products, so this is a great deal! Cengage Unlimited costs $120 for one semester, $180 for two semesters, or $240 for two years. Please review closely the following recommendations:
<table>
<thead>
<tr>
<th>Student</th>
<th>SPRING 2020</th>
<th>FALL 2020</th>
<th>Best Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CHEM 1031</td>
<td>CHEM 1032</td>
<td>Two-semester Cengage Unlimited Subscription for $180. This will give you access to all you need, including Calculus I, II and III course material (WebAssign).</td>
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<tr>
<td></td>
<td>CHEM 1033</td>
<td>CHEM 1034</td>
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<td></td>
<td>MATH 1022</td>
<td>MATH 1041</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>CHEM 1031</td>
<td>CHEM 1032</td>
<td>One-Semester Cengage Unlimited Subscription for $120. This will give you access to all you need, including Calculus III (WebAssign). <strong>Note:</strong> This one-semester subscription will carry over into the spring at NO EXTRA COST since Gen Chem I and II are treated as one course, along with Calculus I, II, and III.</td>
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<tr>
<td></td>
<td>CHEM 1033</td>
<td>CHEM 1034</td>
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<tr>
<td></td>
<td>MATH 1041</td>
<td>MATH 1042</td>
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</tr>
<tr>
<td>C</td>
<td>CHEM 1031</td>
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</tr>
<tr>
<td></td>
<td>CHEM 1033</td>
<td>CHEM 1034</td>
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</table>

You also get a free print rental ($8 shipping) when you activate either text. You may also have the option to purchase a loose-leaf version of your textbook which you can keep. As a bonus, when your subscription ends, you can choose up to six e-books to retain in your virtual locker for an additional twelve months.

**You can purchase access to Cengage Unlimited at the Temple University bookstore** or at: [Cengage Unlimited](https://www.cengage.com). You will be using the MindTap platform and the text by Vining in this course.

Step 1: To access the MindTap interactive e-book click on: [Vining/MindTap](https://www.getenrolled.com). Alternatively, you can use the course key: **MTPP55GNSHK2** at **www.getenrolled.com**

Step 2: You will also need to register your access to OWLv2 and the Kotz text:

**Course Name:** BLOXTON, CHEM 1031- Gen Chem I, Spring 2020

**Course Registration URL:**  [https://www.cengage.com/dashboard/#/course-confirmation/MTPP55GNSHK2/initial-course-confirmation](https://www.cengage.com/dashboard/#/course-confirmation/MTPP55GNSHK2/initial-course-confirmation) or add MTPP55GNSHK2 to your dashboard once enrolled in MindTap.

You must purchase a Cengage subscription first before you can access MindTap.

For step-by-step help on getting started, check out our helpful training videos and instructions at cengage.com/start-strong. Just select that you’re using MindTap and not using an LMS.

Once you’ve registered, view this tutorial video: [https://embed.vidyard.com/watch/tCmahZqerofRy6v3HziSve](https://embed.vidyard.com/watch/tCmahZqerofRy6v3HziSve) to learn how to access the print options that come with your MindTap course.

**Cengage Mobile**

Once you’ve activated MindTap, you have free access to the Cengage Mobile App. Cengage Mobile gives you on-the-go access to homework, grades, offline eBook, flashcards and more. Cengage Mobile is available to download for free from the App Store or Google Play.
Visit support.cengage.com or call 1-800-354-9706 for 24/7 tech support from Cengage. A representative from Cengage will walk through these details on the first day of class. Please visit her to ensure you enrolled in MindTap (lecture), OWLv2 and MindTap Labs appropriately.

Students should have a **Scientific Calculator** that includes exponential and log functions. Note that the possession, use and sharing of graphing and programmable calculators and cell phones, is strictly prohibited when taking exams and quizzes.

For the Final Exam, students are encouraged to purchase the General Chemistry Study Guide from the American Chemical Society (ACS) at: [ACS Study Guide](#). Copies of this guide are on reserve in the Charles Library.

### Point Breakdown, Approximate Grades, and Grading Disputes:

<table>
<thead>
<tr>
<th></th>
<th>Mid-Term Exams* (100 pts each)</th>
<th>400 pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam* (cumulative)</td>
<td>100 pts</td>
<td></td>
</tr>
<tr>
<td>Homework (using the e-book)</td>
<td>150 pts</td>
<td></td>
</tr>
<tr>
<td>Participation in Recitation and Quizzes</td>
<td>100 pts</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>750 pts</strong></td>
</tr>
</tbody>
</table>

* If your final exam score is greater than your lowest mid-term exam score which must be 30% or higher, your lowest mid-term score will be replaced by your final exam score. For example:

If a student has:

<table>
<thead>
<tr>
<th>Exam I</th>
<th>Exam II</th>
<th>Exam III</th>
<th>Exam IV</th>
<th>Final Exam</th>
<th>Total /500</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>60</td>
<td>85</td>
<td>90</td>
<td>85</td>
<td>395</td>
</tr>
</tbody>
</table>

…their exam scores will be:

<table>
<thead>
<tr>
<th>Exam I</th>
<th>Exam II</th>
<th>Exam III</th>
<th>Exam IV</th>
<th>Final Exam</th>
<th>Total /500</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>85</td>
<td>85</td>
<td>90</td>
<td>85</td>
<td>420</td>
</tr>
</tbody>
</table>

However, if a student has:

<table>
<thead>
<tr>
<th>Exam I</th>
<th>Exam II</th>
<th>Exam III</th>
<th>Exam IV</th>
<th>Final Exam</th>
<th>Total /500</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>25</td>
<td>85</td>
<td>90</td>
<td>85</td>
<td>360</td>
</tr>
</tbody>
</table>

…their exam scores will not be changed.

Approximate grades (as a percent) as are follows. **Note that this grading scale may change depending on the class average.**

- **A or A-**: 90 – 100
- **B+ or B or B-**: 80 – 89
- **C+ or C or C-**: 70 – 79
- **D**: 60 – 69
- **F**: 0 – 59

Instructors do not give grades. Students earn grades.
In multi-section courses with different instructors, students are usually concerned about the fairness among sections. We often hear comments such as: “...the other sections have less work to do...”, “...we have 8 quizzes, Dr. X’s sections only had 4...”, “...their exams are easier than ours...”, “…his teacher is an easier grader than mine...”, “…the other section is covering less material than we are…”, etc. The instructors in CHEM 1031 are committed to offering a rigorous course that will prepare you well for future work in chemistry and other sciences. Each instructor will be presenting the course in their own unique style, but the rigor of all sections will be equal. Although all sections will be expected to master the same core material, each instructor may have a few class periods during which time they will cover topics of special interest and importance that may vary from section to section. At the conclusion of the course, the instructors will determine grades in consultation with each other, taking into consideration the class averages and composition of all sections. Please be assured that instructors will ensure fairness in the assignment of final course grades.

With the exception of the Final Exam, all exams are held during the regularly scheduled lecture periods. See the Lecture and Exam Schedule on pages 13 and 14 for exams dates. It may be necessary to alter the course schedule due to inclement weather or for instructional purposes. It is the student’s responsibility to take note of any announced changes. Students should keep a record of all scores received. If there is a discrepancy, the scores recorded in Grades in Canvas® will prevail unless the work can be produced.

Letter grades for the course will be assigned by me based on the exam scores, homework, quiz scores and participation in recitation. If the scoring of an exam is disputed, the student must contact me within two weeks of the score being posted on Canvas®. After the two-week window I am under no obligation to consider grade disputes. If the scoring of a recitation quiz is disputed, the student must contact his/her recitation instructor (TA) to resolve the issue within two weeks after the quiz was returned. If a student disputes the course letter grade, they must contact me within 6 months of the close of the semester. Grade changes are warranted only if there was an error in the calculation of the grade and must be approved by the Dean’s Office.

Cheating: Students are expected to adhere to the highest standards of academic honesty. Collaboration and discussion are encouraged, but all graded work is to be submitted by the student. Cheating of any kind is not tolerated; see the Student Code of Conduct.

Student Rights and Responsibilities: The University has a policy on Student and Faculty Academic Rights and Responsibilities. Temple University is a community of scholars in which freedom of inquiry and expression is valued. Each member of the University community is expected to have respect for the rights of others, to conduct one’s self in a manner that is compatible with the University’s mission, and to take responsibility for one’s actions. To fulfill its functions of promoting and disseminating knowledge, the University has authority and responsibility for maintaining order and for taking appropriate action, including, without limitation, exclusion of those who disrupt the educational process. Please refer to the Student Code of Conduct.

Help: Take full advantage of all of the academic support services available at Temple University. These include your instructor’s and TA’s office hours, and the Student Success Center (SSC), Charles Library, Suite 230 with tutoring in Charles Library Suite 340, SSC. The SSC main space (including PASS program) is in 230 Charles and STEM tutoring will take place in 340 Charles. College can be demanding whether you are first-year or an upper-class student. The SSC offers a wide range of services to help students succeed at Temple and beyond. The tutors
are willing to work with you and walk-in sessions are available all day. Just be sure to have your questions ready to go. Furthermore, coaches are here to help you develop your learning and study skills for any and every course you are enrolled in.

Disability: Any student who has a need for accommodation based on the impact of a disability should contact me to discuss the specific situation as soon as possible. Contact Disability Resources and Services, DRS, or at 215-204-1280 in 100 Ritter Annex, to arrange reasonable accommodations for students with documented disabilities.

Assignments: All homework assignments are to be done online using MindTap and the Vining text (see page 3). It is recommended that you use a reliable computer that has a high-speed internet connection. To check whether your computer meets the requirements for using MindTap, go to: computer check. If you have any technical issues, please go to: CengageTechSupport. I am unable to assist students with technical issues.

Homework: All units, and questions within a unit, that are labeled COUNTS TOWARD GRADE are to be completed before the due dates. I will not give extensions, re-set questions, or provide make-ups for homework assignments under any circumstances. You must remember to Submit Activity for Grading otherwise points earned will not be recorded. Within each unit are questions that incorporate a wide variety of answer types, including multiple-choice, numerical, multi-step problems, fill-in-the-blank, drawing chemical structures, and writing chemical formulas and equations.

An unlimited number of attempts are allowed for questions within units that contain text and incorrect answer warnings are provided. Clicking on Try Again will generate a new question that is similar, but not identical, to the previous question. You should make use of the Tutor Me and Show Solution features if they require help with questions.

The Mastery units consist of groups of questions which are very similar to each other. It is strongly recommended that you complete a Mastery unit before starting the proceeding unit. For Mastery questions, 5 attempts are allowed, and incorrect answer warnings as well as feedback are provided.

The Challenge questions should be attempted after completing all the units for that chapter, including the optional Review questions. For each Challenge question only 2 attempts are allowed along with one incorrect warning. Feedback and solutions may be available after the due date so as to prevent students from sharing answers and solutions onto other students.

Each assignment (chapter) is worth 100 points. Your lowest score will be dropped. The total number of points recorded will be 1000. This number will be scaled down to a homework score out of 150 points and included in the course grade (see page 4).

Practice Problems: As stated above, it is strongly recommended that students work through the optional Review questions in each chapter. In addition, there are plenty of questions available in the e-book by Kotz (see page 3).
**Participation in Recitation and Quizzes:** Recitations are small sections of about 30 students taught by a teaching assistant (TA) under my supervision. These meetings are designed for students to ask questions on lecture material and the exercises/problems that appear in the Vining and Kotz textbooks. Participation in small group work is required. TAs will also review material that will help you prepare for exams. There will be at least 9 recitation quizzes (each worth 10 points) on lecture material covered the previous week, given during the last 10 minutes of the recitation meeting and/or taken online in MindTap. Each quiz will consist of problems taken from the textbooks or very similar problems, chosen and graded by the TAs. Different sections will have slightly different quizzes. Please note that impromptu ("pop") evaluations will not be used in this Chem 1031 course.

It is the prerogative of the TAs whether or not to allow students to take a make-up quiz. Please do not contact me if you missed a recitation and/or to request a make-up quiz.

Your best 7 quizzes (low scores dropped) will be included in the course grade. In addition, students can earn up to 30 points for participating in small group work, working through a problem on the chalk/white board and for being an enthusiastic and involved member of the section. At the end of the semester the TAs will give me your combined participation in recitation and quiz score out of 100 points which will be included in your course grade (see page 4).

**Mid-Term Exams:** Students must have their Temple photo ID card during lecture exams. TU-ID Numbers must be correctly and completely filled in on exams to ensure your score is properly recorded. Students are not allowed to have cell phones and other digital devices such as the Apple Watch on their persons while taking an exam. Cell phones and other digital devices are to be placed in bags/backpacks which will be kept at the back of the lecture hall or left on the front bench of the lecture hall. Students who are caught using cell phones/digital devices during an exam will be ejected from the exam and will receive a score of zero. This violation will be reported to the Dean and the Vice-Provost who will then take the appropriate disciplinary action. Only pens/pencils and scientific calculators (non-programmable and non-graphing) are allowed to be with students during exams. Students are not allowed to take an exam in a lecture section in which they are not registered.

There will be 4 mid-term exams, each worth 100 points and will be held during regularly-scheduled lecture periods (see lecture and exam schedule). Exams will contain a mixture of multiple choice and possibly free response questions. Make-up exams will be offered only if compelling and written documentation is provided. The student must meet with me, ideally within 24 hours, and then I will decide if a make-up exam is justified. The make-up exam will be given 1 or 2 days after the regularly scheduled exam at a time and place determined by me. Students who commute to campus by car or public transportation should allow ample time for travel and unforeseen transportation issues.

Students will be allowed to take a mid-term exam early if they:
- are member of a sports team and are required to travel or play on the day of the exam, and who have official documentation
- are required to go on a field trip as part of a course, and who have official documentation
- will be absent due to due a religious holiday
Final Exam: The Final Exam will be held during finals week on Friday, May 1st, 3:30 – 5:30 pm. The location is yet to be determined. The Final Exam will be a multiple-choice exam covering the work of the entire semester. More details on the Final will be available in mid-April. Students will not be allowed to take the Final Exam early; travel plans should be made after the Final Exam. However, students will be allowed to take the Final Exam at a later date if there is a conflict with another exam, or if a student has more than 2 final examinations in one day, or if an absence is beyond the student’s control and compelling and written documentation is provided.

**LEARNING AND ASSISTANCE:** Attending lectures and effective notetaking are only a small part of the learning process; most learning is done outside of lectures and recitations. Your main resource is your brain. It can solve complicated everyday troubles; it surely can solve chemistry problems. Statements such as “I am no good at...”, “I just don’t get …”, are immature and disparaging. We all have weaknesses but there is nothing more fulfilling in life than overcoming obstacles. We (your instructor, TA and tutors) are here to help you understand the material and to enjoy the challenge. Many students post comments such as: “He doesn’t teach you anything”, “She expects you to learn by yourself”, “I don’t like it when he says that you’re on your own with this”. I am here only to guide you in your learning process. I cannot “learn you” something, but I can teach you something because teaching is only the process to help you learn.

The important people of a college are the students, not the teachers. It is about you, not about us; you are paying thousands of dollars in tuition fees! Your instructors, TAs, and tutors in the Student Success Center, [SSC](#), are here to assist you. Take advantage of their office hours. However, you cannot get something for nothing. Students who demand help because they claim to have no clue about how to answer or how to start a question will be asked to return after they have put in some effort by attempting the problem. Be prepared to show your work so that we can see where you are having difficulties. We may not show you how to do the problem but we will ask you questions and provide guidance so that you can.

A few days before the exams, tutors from the SSC will conduct review sessions in which exercises and problems from the textbook, as well as questions from practice exams, are covered. Students are expected to come prepared to ask questions on problems that they have attempted. Tutors will not re-teach any of the lecture material. More about SSC…

**The Student Success Center (SSC):** The [SSC](#) offers a wide range of academic support services to help students adjust to the expectations of the college classroom and succeed in their classes and beyond. Our peer-to-peer services include tutoring, academic coaching, and Peer Assisted Study Sessions (PASS). If you find yourself struggling with some material in this course, tutors are waiting to assist you with this discipline-based academic support. Walk-in one-on-one walk-in sessions are available all day; just be sure to have your questions ready to go. Your study skills may need some fine-tuning. All of our academic coaches are here to help you develop your overall learning and study skills for any and every course you are taking.

PASS sessions are weekly study meetings that provide students with an opportunity to learn and review course content in an interactive, small-group setting. PASS sessions are guided by a trained peer leader and are designed to allow you to work with your fellow classmates to practice study strategies and deepen your understanding of course content. PASS sessions are free, voluntary, and open to all students enrolled in this course. Your PASS leader for this course will be Ms. Jaylene Everett.
The Student Success Center (SSC) at Temple also offers STEM tutoring for this course. During STEM tutoring sessions, a tutor will work with you one-on-one to review and understand the concepts in this course. Both PASS and STEM programs are free and open to all students enrolled in this course. More information about PASS and STEM tutoring, as well as other services offered by the SSC, is available at www.temple.edu/class, by calling 215-204-8466, or by visiting the SSC’s STEM Learning Lab in Charles Library, room 340. The SSC main space (including PASS program) is in 230 Charles and STEM tutoring will take place in 340 Charles.

More Help: As an experienced instructor of the course, I recognize that students may experience mental health challenges at times throughout the semester. I am committed to creating an inclusive and welcoming classroom space, and I encourage students to speak with me privately about any concerns they may have. I also encourage students to access campus mental health resources including the following:

- Tuttleman Counseling Services (TCS); you are entitled to free confidential mental health counseling and psychiatric services as a student at Temple University. TCS has walk-in hours, drop-in groups, and self-help resources.

- Wellness Resource Center (WRC); the WRC takes a comprehensive approach to promoting mental well-being, including resources for stress management and resilience, education and stigma reduction, and suicide prevention. Staff also provides individual education sessions where students can discuss concerns, learn more about wellness topics, and be connected to resources.

- Disability Resources and Services (DRS); DRS coordinates reasonable accommodations for students with documented disabilities, including mental or emotional illnesses that have been diagnosed by a medical doctor or therapist. Adjusted testing times are just one example of possible accommodations.
SOME FRIENDLY ADVICE ON HOW TO SUCCEED IN GENERAL CHEMISTRY

In my opinion if you follow the advice below by Dr. Andrew Price, there’s a good chance that you will succeed in the course.

❖ Everyone has the potential, but not necessarily the motivation, to do well in General Chemistry. To earn a good grade in chemistry requires a great deal of hard work and dedication. If an athlete dreams of winning an Olympic gold medal, they must train and practice every day. If you want to earn a good grade in chemistry, you should study chemistry just about every day and devote at least 3 hours of study for every 1 hour spent in a chemistry lecture. For this course I recommend a minimum of 12 hours study per week in order to earn an A-level grade.

❖ You should not miss class, even though you think you may have covered most of the material in high school. After all, you are paying to study and attend classes at Temple University! (I am paid by Temple, using your tuition dollars, to lecture and to help to you!)

❖ Learning chemistry on you own, or by copying from my lecture notes or from another student’s notes just does not work for many students. You must listen attentively and take your own notes as best you can. I try to explain difficult concepts better than the text, and I have a different way of approaching certain topics.

❖ It is probably impossible to record everything that I say or write on the overhead document camera, and to understand every piece of information that is presented in my lectures. Some students may find my pace to be too fast (or sometimes too slow). Don’t be too concerned if you have trouble keeping up! You have a text to refer to. In fact, students who do well in this course usually “sit back and enjoy the show” without trying to scribble down everything I say and write. Remember that most of the learning occurs outside of the lectures.

❖ The notes you take in class may be rough and scribble, and therefore may be impossible for you to study from. After each class (and remember that you should plan at least 3 hours of study for every hour you spend in class) read over your rough class notes and then read carefully the relevant sections in the text. Do not attempt to cover more than 2 or 3 units at a time.

❖ If your class notes turn out to be messy, why not try re-writing them into a format that you can follow, understand and study from? Use different colored pens for formulas, equations and definitions. This might sound like a waste of time, but by re-writing a chemical equation, re-drawing a diagram, re-working a problem, things will begin to sink in. You are learning as you go.

❖ Why not set up your notebook so that the left-hand page is for rough notes taken in class, and the right-hand page for “neat” re-written notes prepared on your own with help from the text?
After reading and reviewing/revising your notes, make a start on the units in MindTap/Vining. You must complete all questions that are labeled: **COUNTS TOWARD GRADE** if you want a good homework score, and it is absolutely vital that you complete a Mastery unit before starting the proceeding unit.

Keep up with the homework assignments, do them on your own, do not leave them to the last minute and do not get the answers from other sources (friends/students and the internet) as you will not perform well on exams.

For numerical problems, copy them into a separate notebook and then write down all your work so that you can show an instructor, should you require assistance. Organize this notebook so you can refer back to problems you have done. There will be similar problems on the exams!

The more practice you have doing problems, the better you will perform on exams. I recommend that you attempt additional problems in *Chemistry and Chemical Reactivity* by Kotz. Your Cengage subscription will allow you to access this text at no additional cost!

There will be times, no matter how hard you try, when some topics will just not make sense. This is the time to seek help from me during my office hours (see syllabus), or your recitation TA, or from the tutors in the Student Success Center (SSC), *Charles Library, Suite 340*. Do not be scared or ashamed to ask for help. We don't bite!

Before you begin to study for an exam, make sure you know exactly which chapters and sections you will be tested on. Read over your neat notes again and again, re-do some of the homework problems that you may have answered incorrectly the first time. You should understand everything in order to perform well on an exam. All material covered in lectures and/or the text is fair game on exams.

There will be review workshops before each exam. These are designed to help you. However, do not expect to learn everything during one of these sessions and use them as a substitute for studying. Don’t expect the person who leads these review sessions to go over everything you are responsible for. Come prepared to ask and answer questions. You will not get anything out of these workshops simply by sitting there writing down everything and hoping it will be on the exam!

Attempt the practice exam a few days before the scheduled exam. Do it under exam conditions: in a quiet place where you won’t be disturbed, don’t take a break, and time yourself. It should take you about 50 minutes. Don’t look at the answers until you have completed the entire exam! Grade it yourself and estimate your score. If your score is low and/or you ran out of time, then you need to be better prepared and your time-management skills should be improved.
During the actual exam spend a minute or two looking over the entire exam. Do not dive head first into the first question as it may be the most difficult one on the exam. If you spend too long on a question and struggle through it, you will start to panic, and you may not do well on the rest of the exam and perhaps run out of time. Find questions that you know you can answer well first. Get off to a good start and leave difficult questions to the end. If you have time, check over all your work before handing in your exam.

…and please remember the following:

12
(is the minimum number of hours per week I recommend that you should study for this course)

Don’t just memorize
learn how to analyze
(you must to be able to use concepts you have learned and mastered in order to solve problems you have not seen before)

Do Problems!

Do Problems!

Do Problems!

(the more problems you do, the more likely you’ll do well on exams)
<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>SECTIONS IN VINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan M 13</td>
<td>Introduction to General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>W 15</td>
<td>Matter; Physical and Chemical Properties; Mixtures</td>
<td>1.1a – 1.2c</td>
</tr>
<tr>
<td>F 17</td>
<td>Atomic Structure; Isotopes</td>
<td>2.1a – 2.1c</td>
</tr>
<tr>
<td>M 20</td>
<td><strong>Dr. Martin Luther King, Jr. Day – NO CLASSES</strong></td>
<td></td>
</tr>
<tr>
<td>W 22</td>
<td>Elements; Periodic Table; Covalent Compounds</td>
<td>2.2 – 2.3c</td>
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<tr>
<td>F 24</td>
<td>Naming Covalent Compounds; Ions</td>
<td>2.3d – 2.4a</td>
</tr>
<tr>
<td>M 27</td>
<td>Formulas and Names of Ionic Compounds</td>
<td>2.4b – 2.4e</td>
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<tr>
<td>W 29</td>
<td>The Mole; Molar Mass</td>
<td>3.1a – 3.1b</td>
</tr>
<tr>
<td>F 31</td>
<td>Element and Percent Composition; Empirical Formulas</td>
<td>3.2a – 3.2c</td>
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<tr>
<td>Feb M 3</td>
<td>Molecular Formulas; Hydrates; Chemical Equations</td>
<td>3.2d – 3.3b</td>
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<tr>
<td>W 5</td>
<td>Reaction Stoichiometry; Limiting Reactants; Percent Yield</td>
<td>3.3c – 3.4b</td>
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<tr>
<td>F 7</td>
<td>Combustion and Mixture Analysis</td>
<td>3.5a – 3.5b</td>
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<tr>
<td>M 10</td>
<td>Types of Chemical Reactions; Aqueous Solutions</td>
<td>4.1a – 4.2a</td>
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<tr>
<td>W 12</td>
<td><strong>EXAM I – Chapters 1, 2, and 3</strong></td>
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<tr>
<td>F 14</td>
<td>Solubility; Precipitation Reactions</td>
<td>4.2b – 4.3a</td>
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<td>M 17</td>
<td>Acid-Base, Gas-Forming and Redox Reactions</td>
<td>4.3b – 4.4c</td>
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<tr>
<td>W 19</td>
<td>Molarity; Solution Stoichiometry; Titrations</td>
<td>4.5a – 4.5e</td>
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<tr>
<td>F 21</td>
<td>Properties of Gases; Pressure; Gas Laws</td>
<td>*5a.1a – 5a.3a</td>
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<tr>
<td>M 24</td>
<td>The Ideal Gas Law; Molar Mass and Density of Gases</td>
<td>5a.3b – 5a.3c</td>
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<tr>
<td>W 26</td>
<td>Partial Pressures; Stoichiometry Involving Gases</td>
<td>5a.4a – 5a.4c</td>
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<tr>
<td>F 28</td>
<td>Kinetic-Molecular Theory; Diffusion and Effusion</td>
<td>5a.5a – 5a.5c</td>
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<tr>
<td>Mar M 2</td>
<td><strong>SPRING BREAK – NO CLASSES</strong></td>
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<tr>
<td>W 4</td>
<td><strong>SPRING BREAK – NO CLASSES</strong></td>
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<tr>
<td>F 6</td>
<td><strong>SPRING BREAK – NO CLASSES</strong></td>
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</tbody>
</table>

* Chapter 5a in the online e-book is the same as Chapter 10 in the printed version of the text.
† Chapter 5b in the online e-book is the same as Chapter 5 in the printed version of the text.
<table>
<thead>
<tr>
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<tr>
<td>M 9</td>
<td>Energy; Thermodynamics; Heat and Work</td>
<td>†5b.1a – 5b.1c</td>
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<tr>
<td>W 11</td>
<td>Enthalpy; Specific Heat Capacity; Heat Transfer</td>
<td>5b.2a – 5b.3b</td>
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<td>F 13</td>
<td>Heating Curves; Enthalpy Change; Calorimetry</td>
<td>5b.3c – 5b.4d</td>
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<td>M 16</td>
<td>Hess's Law; Standard Heats of Formation</td>
<td>5b.5a – 5b.6b</td>
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<td>W 18</td>
<td>EXAM II – Chapters 4, *5a, and 5b (part)</td>
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<tr>
<td>F 20</td>
<td>Electromagnetic Radiation and Spectrum; Photons</td>
<td>6.1a – 6.2a</td>
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<tr>
<td>M 23</td>
<td>Atomic Spectra; Bohr Model; Quantum Theory</td>
<td>6.3a – 6.4a</td>
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<tr>
<td>W 25</td>
<td>Quantum Numbers; Shapes and Energies of Orbitals</td>
<td>6.5a – 6.5d</td>
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<td>F 27</td>
<td>Electron Spin; Electron Configurations</td>
<td>7.1a – 7.3b</td>
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<tr>
<td>M 30</td>
<td>Electron Configurations and the Periodic Table</td>
<td>7.3c – 7.3d</td>
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<td>Apr W 1</td>
<td>Periodic Properties of Atoms and Ions</td>
<td>7.4a – 7.5c</td>
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<td>F 3</td>
<td>Covalent Bonding; Lewis Symbols and Structures</td>
<td>8.1a – 8.2b</td>
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<td>M 6</td>
<td>Octet Rule Exceptions; Resonance Structures</td>
<td>8.2c – 8.2d</td>
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<td>W 8</td>
<td>EXAM III – Chapters 5b (part), 6 and 7</td>
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<tr>
<td>F 10</td>
<td>Bond Properties; Formal Charge</td>
<td>8.3a – 8.4a</td>
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<tr>
<td>M 13</td>
<td>Bond Polarity; Electronegativity; VSEPR Theory</td>
<td>8.4b – 8.5a</td>
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<tr>
<td>W 15</td>
<td>Molecular Shape; Molecular Polarity</td>
<td>8.5b – 8.6a</td>
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<tr>
<td>F 17</td>
<td>Valence Bond Theory; Hybrid Orbitals</td>
<td>9.1a – 9.2c</td>
</tr>
<tr>
<td>M 20</td>
<td>Pi Bonding</td>
<td>9.3</td>
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<tr>
<td>W 22</td>
<td>Introduction to Molecular Orbital Theory</td>
<td>9.4</td>
</tr>
<tr>
<td>F 24</td>
<td>Finish Up</td>
<td></td>
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<tr>
<td>M 27</td>
<td>EXAM IV – Chapters 8 and 9</td>
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<tr>
<td>May F 1</td>
<td>FINAL EXAM – 3:30-5:30 pm; Location TBD</td>
<td></td>
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</table>
At the completion of the course, students should be able to:

• Apply dimensional analysis to solve problems.

• Understand the mole concept and apply moles in calculations relating quantities of substances to each other in reactions.

• Understand gas laws and use gas laws in applications to solve problems.

• Explain the relationship between heat, work, internal energy, and enthalpy changes to solve problems involving thermochemical concepts.

• Explain the concept of quantization as it applies to modern atomic theory.

• Employ different bonding theories to determine chemical connections between atoms and determine the three-dimensional shape of a substance.