SOME CURIOUS ITEMS: Here are some questions that you may have a better understanding of after taking this course. 1. What are dipsticks used for in a healthcare setting and can I use these in lab? 2. Why do two solutions sometimes produce a solid when mixed together? 3. What is the volcano experiment and how does it work? 4. What is a buffer and how does a weak acid of a buffer keep a strong base from drastically raising the pH of a solution? 5. How does pH level relate to the burning pain that you feel when doing strenuous exercise? 6. How does bicarbonate relate to acidosis and alkalosis?

LEARNING GOALS:
1. Students will relate chemical concepts to medical terminology.
2. Students will relate terms such as hypo/hypercalcemia or hypo/hyperkalemia to blood work charts for themselves.
3. Students will demonstrate a basic understanding of chemistry of kidneys and the regulation of various chemical components levels by kidneys.
4. Students will describe/explain how acids/bases interact and how this applies to both food and medicine and other life aspects.
5. Students will interpret blood pH, CO$_2$ and bicarbonate date into acid/base balance of blood and how this relates to acidosis and alkalosis medical conditions.
6. Students given a chemical equation, they will predict the direction of change in response to stress placed on the system.
7. Students will relate/apply concepts of gas laws and pressure to items such as breathing, tire pressure and blood pressure.
8. Students will explain why NaCl dissolves in water but oil does not mix with water.

Keep this syllabus; it contains important information which you will need to know in order to succeed in this course. Chemistry 1021 is the first semester of Introduction to Chemistry lecture. This broad survey course in chemistry is designed primarily for non-science majors and those planning careers in allied health or horticulture. Introduction to Chemistry is a core curriculum course; however, it is not accepted by medical or dental schools, and cannot normally be used as a prerequisite for Chemistry 2201 (Organic Chemistry). If you expect to take Science and Technology courses in Chemistry (2000 level or above), you should take the 1031-1034 sequence (General Chemistry) rather than this course.

Any student who has a need for accommodation based upon the impact of a disability should contact his or her course instructor privately to discuss their specific situation as soon as possible; also it is advisable for them to contact Disability Resources and Services at 215-204-1280.
GENERAL COURSE INFORMATION: First class: Monday, August 27, 2018. Last day to drop (tuition refund available): Monday, September 10, 2018. Last day to withdraw (no refund): Tuesday, October 23, 2018. Students who have previously withdrawn from the same course, or who have already withdrawn from 5 courses since September 2003 may not withdraw. Drops and withdrawals are handled by the student’s college office.

OFFICE HOURS: Here are six “official office hours in 444 Beury Hall”: Monday 12:00-2:00; Tuesday 2:00-3:00; Thursday 10:00-11:00; Friday 2:00-4:00. I can also be reached by e-mail at jdb84@temple.edu or by telephone at 1-215-204-2385. I will post my complete schedule under Modules Section and Announcements Section of Chem 1021 Lecture Canvas site.

OWL2 ONLINE HOMEWORK AND QUIZ SYSTEM: This course will require OWLv2 from Cengage. You can choose to purchase OWLv2 through Cengage Unlimited—a digital subscription service designed to save you a lot of money, or you can purchase the full bundle (course text: Introduction to General, Organic and Biochemistry, Bettelheim/Brown/Campbell/Farrell/Torres, 11th E and OWLv2 access code) at the bookstore (they will also have Cengage Unlimited codes). DO NOT PURCHASE both the bundle and Cengage Unlimited. With Cengage Unlimited, you can access ANY Cengage materials you’re using across ALL of your courses AND a library of over 22,000 ebooks, study guides and reference materials.

Cengage Unlimited costs $119.99 and will cover both Chem 1021 and Chem 1022.

With Cengage Unlimited, you also get a print rental when you activate OWLv2. You’ll pay just $7.99 + free shipping. You may also have the option to purchase a looseleaf version of your textbook, which you can keep. As a bonus, when your subscription ends, you can choose up to six ebooks to retain in your virtual locker for an additional 12 months.

You can purchase access to Cengage Unlimited in the college bookstore or at www.cengage.com.

Getting Registered

To access your course materials and explore Cengage Unlimited, visit https://login.cengagebrain.com/course/E-26E65QP36K8YC and log in with your Cengage account.

Additional Registration/Purchasing Support: Should you need additional guidance, please visit www.cengage.com/start-strong.
LECTURE TEXT AND CANVAS:

1. REQUIRED: Package containing Introduction to General, Organic and Biochemistry, 11th Edition, (with OWLv2, 4 terms (24 months) Printed Access Card for OWLv2 w/ MTR Intro GEN ORG & BIOCHEMISTRY) by Bettelheim, Brown, Campbell, Farrell, Torres. Published by Cengage. This book is available at the campus bookstore in Howard Gittis Student Center.

2. In place of the 11th Edition package listed above you can use Introduction to General, Organic and Biochemistry, 11th Edition by Bettelheim, Brown, Campbell, Farrell, Torres Published by Cengage or Introduction to General, Organic and Biochemistry (10E, or 9E) by Bettelheim, Brown, Campbell and Farrell Published by Cengage (10E) or Thompson, Brooks/Cole (9E). For students that choose this option they must also purchase the OWLv2, 4 terms (24 months) Printed Access Card for OWLv2 w/ MTR Intro GEN ORG & BIOCHEMISTRY.

3. Optional: There is Printed Student Solutions Manual for Bettelheim/Brown/Campbell/Farrell/Torres’ Introduction to General, Organic and Biochemistry, 11th Edition available at the Main Campus Bookstore.


5. You should check Canvas and Temple e-mail accounts weekly for possible announcements and possible supplementary materials. All of the handouts will be available under the Modules Section of Canvas. If you miss a lecture or recitation where lecture or recitation materials for subsequent meeting(s) were passed out, you will need to get these materials from Canvas.

LECTURE AND RECITATION PREPARATION: You should expect to spend an average of 9 hours each week outside of lab, lecture, or recitation preparing for Chem 1021 lecture and recitation. This preparation includes but is not limited to preparing for lecture by reading chapters before they are covered in lecture, and preparing for or doing homework assignments, recitation assignments, quizzes, midterms and final examinations. In order to help you succeed in this course you should also make use of your lecture and recitation instructors’ office hours, do the lecture and recitation preparation work that is Sent out in announcements/e-mails for upcoming lecture and recitation meetings and attend all lecture and recitation sessions as well as keeping up with the Chem 1021 lecture homework and quiz assignments. It is very important that you do not fall behind. It will be very difficult to catch up if you fall behind.

Part of a suggested study strategy is as follows: Prepare for upcoming lectures and recitations as given above. After lecture review your notes for questions (ideally the same day). Read the sections of the chapters again from the text that were covered in lecture and then work problems from the end of the chapter and OWL homework problems that
relate to the sections covered in lecture. Write down any topics or questions from areas that you are having difficulty with to ask questions about in recitation or during office hours or study groups. Work through the chapter homework one section at a time and then review the sections that you went over before your study session for that day is finished. It is also necessary to constantly review material from previous sections and chapters in order to prepare for the current material and the cumulative final exam.

**TENTATIVE CHEM 1021 LECTURE SCHEDULE BASED ON 11th ED, 10th ED AND 9th ED.**

<table>
<thead>
<tr>
<th>MEETING</th>
<th>DAY</th>
<th>CHAPTER OR EXAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>T 8/28</td>
<td>Syllabus; Chapter 1: Matter, Energy and Measurement; Appendix I and II</td>
</tr>
<tr>
<td>2.</td>
<td>Th 8/30</td>
<td>Chapter 1: Matter, Energy and Measurement; Appendix I and II</td>
</tr>
<tr>
<td>3.</td>
<td>T 9/4</td>
<td>Chapter 1: Matter, Energy and Measurement; Appendix I and II</td>
</tr>
<tr>
<td>4.</td>
<td>Th 9/6</td>
<td>Chapter 1: Matter, Energy and Measurement; Appendix I and II</td>
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<tr>
<td>NOTE:</td>
<td></td>
<td>Chapter 1 Sections 1.3-1.5 and Appendixes I and II will be covered in recitations in weeks 1 and 2.</td>
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<tr>
<td>5.</td>
<td>T 9/11</td>
<td>Chapter 2: Atoms</td>
</tr>
<tr>
<td>6.</td>
<td>Th 9/13</td>
<td>Chapter 2: Atoms</td>
</tr>
<tr>
<td>7.</td>
<td>T 9/18</td>
<td>Chapter 2: Atoms</td>
</tr>
<tr>
<td>8.</td>
<td>Th 9/20</td>
<td>Chapter 3: Chemical Bonds</td>
</tr>
<tr>
<td>10.</td>
<td>Th 9/27</td>
<td>Chapter 3: Chemical Bonds</td>
</tr>
<tr>
<td>11.</td>
<td>T 10/2</td>
<td>Chapter 3: Chemical Bonds</td>
</tr>
<tr>
<td>12.</td>
<td>Th 10/4</td>
<td>Chapter 4: Chemical Reactions</td>
</tr>
<tr>
<td>13.</td>
<td>T 10/9</td>
<td>Chapter 4: Chemical Reactions</td>
</tr>
<tr>
<td>14.</td>
<td>Th 10/11</td>
<td>Midterm I Exam: Chapters 1, 2 and 3</td>
</tr>
<tr>
<td>15.</td>
<td>T 10/16</td>
<td>Chapter 4: Chemical Reactions</td>
</tr>
<tr>
<td>16.</td>
<td>Th 10/18</td>
<td>Chapter 4: Chemical Reactions</td>
</tr>
<tr>
<td>17.</td>
<td>T 10/23</td>
<td>Chapter 8: Acids and Bases</td>
</tr>
<tr>
<td>18.</td>
<td>Th 10/25</td>
<td>Chapter 8: Acids and Bases</td>
</tr>
<tr>
<td>19.</td>
<td>T 10/30</td>
<td>Chapter 8: Acids and Bases</td>
</tr>
<tr>
<td>20.</td>
<td>Th 11/1</td>
<td>Chapter 7: Reaction Rates and Chemical Equilibrium</td>
</tr>
<tr>
<td>21.</td>
<td>T 11/6</td>
<td>Chapter 7: Reaction Rates and Chemical Equilibrium</td>
</tr>
<tr>
<td>22.</td>
<td>Th 11/8</td>
<td>Chapter 6: Solutions and Colloids</td>
</tr>
<tr>
<td>23.</td>
<td>T 11/13</td>
<td>Chapter 6: Solutions and Colloids</td>
</tr>
<tr>
<td>24.</td>
<td>Th 11/15</td>
<td>Midterm II Exam: Chapters 4, 8 and 7</td>
</tr>
<tr>
<td>25.</td>
<td>T 11/27</td>
<td>Chapter 6: Solutions and Colloids</td>
</tr>
<tr>
<td>27.</td>
<td>T 12/4</td>
<td>Chapter 5: Gases, Liquids, and Solids</td>
</tr>
<tr>
<td>28.</td>
<td>Th 12/6</td>
<td>Chapter 9: Nuclear Chemistry</td>
</tr>
</tbody>
</table>

Note: The Chem 1021 Cumulative Final Examination on Chapters 1 - 9 will be given on Tuesday, 12/18/18, from 8:00 am - 10:00 am in 166 Beury Hall.
ASSESSMENT:

GRADING: Grades will be based on a possible 1000 points for Chemistry 1021. The grade breakdowns are given below and are based on the 11th edition.

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework (10%)</td>
<td>100</td>
</tr>
<tr>
<td>Quizzes (10%)</td>
<td>100</td>
</tr>
<tr>
<td>Midterm Exam I (Ch. 1, 2, 3) (25%)</td>
<td>250</td>
</tr>
<tr>
<td>Midterm Exam II (Ch. 4, 8, 7) (25%)</td>
<td>250</td>
</tr>
<tr>
<td>Cumulative Final Exam (Ch. 1-9) (30%)</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

MID TERM REPORTS: The University requires, for submission to them, a mid term report for this course for each student. These reports will be used to advise and council students on seeking appropriate assistance in their studies.

LECTURE GRADING: A student's lecture grade will be based upon the student's overall performance in homework assignments (10%), lecture quizzes (10%), lecture Midterm Exam I (25%), lecture Midterm Exam II (25%), and a cumulative Final Exam (30%). These examinations will be taken in the lecture room. The lecture quizzes (that are not online) will be taken in the recitation sections unless it is specified that certain lecture quizzes are taken in lecture.

HOMEWORK (10%): There will be a total of nine homework assignments. Each of these nine homework assignments will correspond to material from one chapter in your Chem 1021 lecture text. Most of the nine homework assignments will be online homework assignments that will be available through the OWL2 online system. The rest of the homework assignments that are not online homework assignments will be due in either recitation and/or lecture. The due dates for the homework assignments will be posted under the Announcements section on Canvas throughout the fall semester. Homework assignments that are due in recitation must be turned in at the recitation section that the student is registered for unless there is an extreme emergency that can be documented and approved by Dr. Bloxton.

LECTURE QUIZZES (10%): There will be a total of nine lecture quizzes that will be taken either online through the use of OWL2 online system or given in recitation and/or lecture. Each of these nine lecture quizzes will correspond to material from approximately one chapter in your Chem 1021 lecture text. The recitation and/or lecture quiz cannot be given to a student that comes in to class after another student has already finished and left the quiz room. Makeup recitation and/or lecture quizzes are not given. To allow for flexibility in timing of recitation and/or lecture quizzes and to help students prepare for lecture quizzes, a fixed lecture quiz schedule has not been established. However the recitation and/or lecture quizzes will be announced one class period in advance and the dates of the recitation and/or lecture quizzes will be posted under the Announcements section on
Canvas throughout the fall semester. Quizzes that are given in recitation must be taken in
the recitation section that the student is registered for unless there is an extreme emergency
that can be documented and approved by Dr. Bloxton. Copying, talking and other forms of
communication between students during a recitation and/or lecture quiz are prohibited. The
sharing of calculators, use of information storage devices, cell phones, pagers and other
communication devices during quizzes is prohibited. The use of programmable and/or
graphing calculators on examinations or quizzes is strictly prohibited. The use of simple
calculators (i.e. those without keyboards) is allowed only with the permission of the
Instructor. The use of PDAs, cell phones, and other communication devices and electronic
or paper dictionaries is strictly prohibited. The Instructor reserves the right to design
quizzes and examinations whereby the use of calculators is prohibited but the problems can
be solved by estimation.

MIDTERM EXAMINATIONS I and II (25% EACH) AND FINAL EXAMINATION
(30%): Midterm Examination I is scheduled for Thursday, 10/11/18, and Midterm
Examination II is scheduled for Thursday 11/15/18. The Final Examination is scheduled for
Tuesday 12/18/18. If a student has an excusable reason for missing a midterm or final
examination a makeup midterm or final examination can be given. If, however, a student
misses taking a midterm or final exam, during the exam times when it is given, then a grade
of zero will be given if a student has no excused absence for missing a midterm or final
exam. For an absence to be considered excusable, you must provide the lecture instructor
with a written documented note, explaining the reason for the absence; whereupon, the
instructor will notify you whether or not the absence is considered excusable. A midterm or
final examination cannot be given to a student that comes in to class after another student
has already finished and left the exam room. Copying, talking and other forms of
communication between students during a midterm or final examination are prohibited. The
sharing of calculators, use of information storage devices, cell phones, pagers and other
communication devices during a midterm or final examination is prohibited. The use of
programmable and/or graphing calculators on examinations or quizzes is strictly prohibited.
The use of simple calculators (i.e. those without keyboards) is allowed only with the
permission of the Instructor. The use of PDAs, cell phones, and other communication devices and electronic or paper dictionaries is strictly prohibited. The Instructor reserves
the right to design quizzes and examinations whereby the use of calculators is prohibited but
the problems can be solved by estimation. A student can only take a midterm or final
examination once.

OPTIONAL MIDTERM AND FINAL EXAM REVIEW SESSIONS: There will be
optional midterm and final exam review sessions for all exams in the Chem 1021 lecture
course. The times and locations as well as the preparation for these optional exam review
sessions will be announced and posted under Announcements section on Canvas in due
course.
**RECITATION:** Recitation is a time when you can ask questions and practice problem solving. Specific problems from the book will be assigned and the problems will be reviewed in recitation. Active learning will also be incorporated into recitation sessions which will include group work and problem solving exercises whereby students have the opportunity to actively engage with the problems, each other, and their TA. Some of the possible collaborative and interactive learning techniques involved may include think-pair-share and reciprocal teaching. Attendance is expected and required. Some quizzes will also be given in recitation, lecture and also online. Some homework assignments are also due in recitation and lecture in addition to online homework assignments. Quizzes that are taken in recitation must be taken in the recitation section that the student is registered for unless there is an extreme emergency that can be documented and approved by Dr. Bloxton. Homework assignments that are due in recitation must be turned in at the recitation section that the student is registered for unless there is an extreme emergency that can be documented and approved by Dr. Bloxton. Full participation in the problem solving exercises is strongly associated with success.

**DOCUMENTATION OF LECTURE/RECITATION SCORES:** Student’s recitation/lecture quizzes and homework assignments, midterm and final examination scores will be recorded on Canvas on a regular basis. Students need to keep all of their recitation/lecture quizzes and homework assignments and midterm examinations in the event that a score is not recorded or if the score is recorded incorrectly. Students need to keep all of these graded Chem 1021 lecture materials until such time that the final grades have been submitted and the scores and final Chem 1021 lecture grade has been reviewed by the student on Canvas. A score cannot be changed unless the student can supply the recitation/lecture quizzes and homework assignments and midterm examinations that are in question.

**PROFESSIONAL EXPECTATIONS:**

**ABSENCES:** Excessive absences from any part of Chemistry 1021 lecture and or recitation can result in a student receiving an F as a final grade. Attendance at all lectures and recitations is required. It is the responsibility of the student to make sure that his/her absence is recorded as excused if such is the case.

**TEMPLE’S POLICY ON STUDENT AND FACULTY ACADEMIC RIGHTS AND RESPONSIBILITIES:** Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed through the following link: http://policies.temple.edu/getdoc.asp?policy_no=03.70.02.

**ACADEMIC HONESTY:** The contents of this section are from Temple University’s 2005-2006 Undergraduate Bulletin in the Students Responsibilities part of Responsibilities section. The web address is http://www.temple.edu/bulletin/Responsibilities_rights/responsibilities/responsibilities.shtm#honesty.
Temple University believes strongly in academic honesty and integrity. Plagiarism and academic cheating are, therefore, prohibited. Essential to intellectual growth is the development of independent thought and a respect for the thoughts of others. The prohibition against plagiarism and cheating is intended to foster this independence and respect.

Plagiarism is the unacknowledged use of another person's labor, another person's ideas, another person's words, another person's assistance. Normally, all work done for courses -- papers, examinations, homework exercises, laboratory reports, oral presentations -- is expected to be the individual effort of the student presenting the work. Any assistance must be reported to the instructor. If the work has entailed consulting other resources -- journals, books, or other media --, these resources must be cited in a manner appropriate to the course. It is the instructor's responsibility to indicate the appropriate manner of citation. Everything used from other sources -- suggestions for organization of ideas, ideas themselves, or actual language -- must be cited. Failure to cite borrowed material constitutes plagiarism. Undocumented use of materials from the World Wide Web is plagiarism.

Academic cheating is, generally, the thwarting or breaking of the general rules of academic work or the specific rules of the individual courses. It includes falsifying data; submitting, without the instructor's approval, work in one course which was done for another; helping others to plagiarize or cheat from one's own or another's work; or actually doing the work of another person.

The penalty for academic dishonesty can vary from receiving a reprimand and a failing grade for a particular assignment, to a failing grade in the course, to suspension or expulsion from the University. The penalty varies with the nature of the offense, the individual instructor, the department, and the school or college. Students who believe that they have been unfairly accused may appeal through the School or College's academic grievance procedure. See Grievances under Students Rights in this section.

POLICIES AND PROCEDURES:

CELL PHONE AND COMMUNICATION DEVICES: The use of cell phones, texting devices and other communication devices during lecture and recitation is considered to be disruptive. Therefore cell phones, texting devices and other communication devices should be placed on silent mode and not used during lecture and recitation except in the case of an emergency.

WITHDRAWALS: Students may withdraw from the course with a grade of W at any time up to and including Tuesday, October 23, 2018. No withdrawal is possible after that date. A student who withdraws from Chemistry 1021 may or may not withdraw from Chemistry 1023. Students who have previously withdrawn from the same course, or who have already withdrawn from 5 courses since September 2003 may not withdraw. Drops and withdrawals are handled by the student's college office. The full university policy on withdrawals can be found at http://policies.temple.edu under section 02.10.14.
INCOMPLETES: The grade of I (Incomplete) will only be considered in cases of end of semester emergency situations where at least 50% of the term's work has already been completed with a passing grade, and only for reasons beyond the student’s control. To receive a grade of I, the student first must sign a written agreement with the instructor involved and the Chemistry department, specifying the manner by which the missed work will be completed. Notify Dr. Bloxton if you believe you have a valid reason to obtain a grade of I in Chemistry 1021. The full university policy on incompletes can be found at http://policies.temple.edu under section 02.10.13.

ELECTRONIC CALCULATORS AND DICTIONARIES: Although the types of calculations employed in Chemistry 1021 are generally quite simple, you may find that a pocket calculator (properly operated) will improve your accuracy. If you wish to invest in a calculator, it is suggested that you select a model which can deal with logarithms and scientific notation. Be certain that if you use a calculator, it is kept in good condition, especially for quizzes and examinations. Calculator failure will not be accepted as an excuse for a poor quiz or examination. The sharing of calculators, use of information storage devices, cell phones, pagers and other communication devices during quizzes or examinations is prohibited. The use of programmable and/or graphing calculators on examinations or quizzes is strictly prohibited. The use of simple calculators (i.e. those without keyboards) is allowed only with the permission of the Instructor. The use of PDAs, cell phones, and other communication devices and electronic or paper dictionaries is strictly prohibited. The Instructor reserves the right to design quizzes and examinations whereby the use of calculators is prohibited but the problems can be solved by estimation.

The Center for Learning and Student Success (CLASS): The CLASS 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). Struggling with some material in your class? Our tutors are waiting to assist you with this discipline-based academic support! Come in for a one-on-one walk-in session today – just be sure to have your questions ready to go. Do your study skills 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 in! Stop on by for a walk-in session or make an appointment with one today. Walk-in sessions are available all day. Check out all that the CLASS has to offer by stopping by Tuttleman Learning Center Suite 100, 215-204-8466 or checking us out online at www.temple.edu/class