SOME CURIOUS ITEMS AND/OR LEARNING GOALS: Here are some questions that you may have a better understanding of after taking this course. 
1. Why do molecules that have the same molecular formula have different physical and maybe different chemical properties? 
2. How can a strong base be used to make a buffer system when by definition a buffer is composed of a weak acid and its conjugate weak base? 
3. Why are calcium and potassium ions included in routine blood work? 
4. How does inhaling and exhaling air in a paper bag potentially help someone that is hysterical? How does this relate to an isotonic solution of ammonium chloride? 
5. I have an amine compound that refuses to dissolve in water. How can I change this solubility attitude of the amine? How does this relate to drug formulations? 
6. What are dipsticks used for in a healthcare setting and can I use these in lab? 
7. What does the displays on heart monitors mean? 
8. How do monosaccharides relate to diabetes mellitus and how can diabetes mellitus be prevented? 
9. How does fast food relate to cholesterol levels and heart disease? Is all cholesterol bad? 
10. This is a message from the potato: I don’t want to participate in the Enzymes Lab Activity. Go get your catalase from the liver instead.

Keep this syllabus; it contains important information which you will need to know in order to succeed in this course. Chemistry 1024 is the second semester of Introduction to Chemistry Laboratory. 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 that can be used to satisfy the university Core Science & Technology Second Level (SB) requirement; 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. 
A student cannot be enrolled in Chemistry 1024 unless that student has a passing grade of C- or higher in both Chemistry 1021 and Chemistry 1023 or their equivalent. A student will not be permitted to enroll in Chemistry 1024 unless that student also enrolls in Chemistry 1022, or has previously completed Chemistry 1022 or its equivalent with a passing grade of C- or higher.

Disability Disclosure Statement: Any student who has a need for accommodations based on the impact of a documented disability or medical condition should contact Disability Resources and Services (DRS) in 100 Ritter Annex (drs@temple.edu; 215-204-1280) to request accommodations and learn more about the resources available to you. If you have a DRS accommodation letter to share with me, or you would like to discuss your accommodations, please contact me as soon as practical. I will work with you and with DRS to coordinate reasonable accommodations for all students with documented disabilities. All discussions related to your accommodations will be confidential.
GENERAL COURSE INFORMATION: First class: Tuesday, January 14, 2020. Last day to drop (tuition refund available): Monday, January 27, 2020. Last day to withdraw (no refund): Wednesday, March 18, 2020. 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 Spring Semester ends on Tuesday, May 5, 2020.

LABORATORY PREPARATION: Chem 1024 is a challenging course where you should expect to spend an average of 3 hours each week outside of lab, lecture, or recitation preparing for Chem 1024 laboratory. This preparation includes preparing for or doing prelaboratory assignments, prelab quizzes, laboratory reports, midterm and final examinations. In order to help you succeed in this course you should also make use of your lab instructor’s office hours, do the lab preparation work that is given out in a handout during the previous lab meeting and attend all lecture and recitation sessions as well as keeping up with the Chem 1022 lecture homework and quiz assignments.

LABORATORY TEXT, LABORATORY HANDOUTS AND CANVAS:

1. Bloxton, J.D., 2020, Chemistry 64 (1024) Introductory Chemistry Laboratory Manual, Temple University Copy Center, Philadelphia. The Chemistry 64 (1024) Introductory Chemistry Laboratory Manual is available for purchase on Temple University’s Main Campus in 234 Ritter Hall Copy Center.
2. Laboratory handouts will be available on Canvas or supplied by your laboratory instructor.
3. Students should check both Canvas and their Temple e-mail accounts each week for possible announcements and possible supplementary materials. All of the handouts will be available under the Modules Section of Canvas. If a student misses a laboratory where laboratory materials for the following week were passed out, the student will need to get these materials from Canvas. This is especially important in preparation for prelaboratory quizzes, prelaboratory questions and makeup laboratories.

TENTATIVE CHEM 1024 LABORATORY SCHEDULE

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DAY</th>
<th>LAB MANUAL</th>
</tr>
</thead>
</table>
| 1.   | T 1/14/- W 1/15 | 1. Check in; Safety
2. Chem 1024 (64): Prelaboratory Questions and Supplement to Holum Experiments 41 and 59 213 - 220
3. Chem 1024 (64): Experiment 41 From Holum Laboratory Manual 221 - 224
4. Chem 1024 (64): Prelaboratory Questions and Supplement to Holum Experiments 41 and 59 230 – 233 |
<table>
<thead>
<tr>
<th>WEEK</th>
<th>DAY</th>
<th>TENTATIVE CHEM 1024 LABORATORY SCHEDULE CONTINUED</th>
</tr>
</thead>
</table>
| 2.   | T 1/21 - W 1/22 | 1. Chem 1024 (64): Levels of Calcium Ions and Disease Processes (Start)  
2. Chem 1024 (64): Module 3 Acid-Base Chemistry: Part I: Determination of The pKa and Ka of a Drug Product |
|      |     | 143 – 160 |
|      |     | Handout or From Pages 129 - 150 in Chem 1023 Lab Manual |
| 3.   | T 1/28 - W 1/29 | 1. Chem 1024 (64): Levels of Calcium Ions and Disease Processes (Conclusion)  
2. Chem 1024 (64): Levels of Potassium Ions and Disease Processes (Start)  
3. Chem 1024 (64): Alkalosis Experiment: |
|      |     | 143 – 160 |
|      |     | Handout or From Pages 187 - 212 in Chem 1023 Lab Manual |
| 4.   | T 2/4 - W 2/5 | 1. Chem 1024 (64): Levels of Potassium Ions and Disease Processes (Conclusion)  
2. Chem 1024 (64): Prelaboratory Questions and Supplement to Holum Experiments 41 and 59  
3. Chem 1024 (64): Experiment 59 From Holum Laboratory Manual  
4. Chem 1024 (64): Prelaboratory Questions and Supplement to Holum Experiments 41 and 59 |
|      |     | 161 - 174 |
|      |     | 213 - 220 |
|      |     | 225 - 229 |
|      |     | 230 – 233 |
2. Acetylcholine Handout |
|      |     | 1 - 24 |
| 6.   | T 2/18 - W 2/19 | 1. Urinalysis  
|      |     | 175 - 188 |
| 7.   | T 2/25 - W 2/26 | Midterm Examination Review  
A Possible To Be Announced Lab Activity |

Note: Spring Break is Monday 3/2 – Sunday 3/8.
### TENTATIVE CHEM 1024 LABORATORY SCHEDULE CONTINUED

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DAY</th>
<th>PAGES IN CHEM 1024 LAB MANUAl</th>
</tr>
</thead>
</table>
2. WARD’S Clinical Diagnosis of Diabetes Using Simulated Blood and Urine Lab Activity  
| 11.  | T 3/31 - W 4/1 | 1. Supplement to WARD’S Cholesterol Determination of Simulated Blood Lab Activity  
2. WARD’S Cholesterol Determination of Simulated Blood Lab Activity  
| 12.  | T 4/7 - W 4/8 | 1. WARD’S AP Biology Lab 2 Enzyme Catalysis Lab Activity  
2. Prelaboratory Questions, Laboratory Report Sheets and Study Guide to Accompany Chem 1024 (64) Materials Titled “WARD’S AP Biology Lab 2 Enzyme Catalysis Lab Activity” |
| 13.  | T 4/14 - W 4/15 | Final Examination Review  
A Possible To Be Announced Lab Activity |
| 14.  | T 4/21 - W 4/22 | Laboratory Final Examination on Experiments in Weeks 6, 9-12 |
ASSESSMENT:

GRADING: Grades will be based on a possible 1000 points for Chemistry 1024. The grade breakdowns are given below:

- Midterm (20%) 200 points
- Final (20%) 200 points
- Lab. Reports (50%) 500 points
- Lab Quizzes (10%) 100 points

Total 1000 points

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 counsel students on seeking appropriate assistance in their studies.

LABORATORY GRADING: A student's laboratory grade will be based upon the student's overall performance in laboratory quizzes (10%), as well as on the laboratory exercises, that is, the laboratory reports (50%), and the student's grades on a midterm examination (20%) and a final examination (20%). These quizzes and examinations will be taken in the laboratory room. Please note that impromptu (“pop”) evaluations will not be used in this Chem 1024 course.

LABORATORY QUIZZES (10%): There will be a total of eleven laboratory quizzes (starting Tuesday, 1/28/20) that will be given at the beginning of the laboratory period. These laboratory quizzes can cover theory, laboratory techniques, calculations, and laboratory procedures for the experiment that students are doing in that laboratory period or material that was previously covered to help prepare for midterm and final exams. A laboratory quiz will also be given during the midterm and final exam review sessions. (Note: These laboratory quizzes during the midterm and final exam review sessions are not makeup laboratory quizzes.) The lowest laboratory quiz will be dropped. If one laboratory quiz is missed, a score of zero will be assigned for the missed laboratory quiz and this laboratory quiz will be dropped instead of the lowest laboratory quiz. Only one laboratory quiz is dropped. If a student misses two or more laboratory quizzes, scores of zero will be assigned for all missed laboratory quizzes. The laboratory quiz cannot be given to a student that comes in to class after another student has already finished and left the quiz room or after everyone in the quiz room has finished the quiz. Students are required to take the laboratory quiz in the lab section that they are registered in. If a student misses a laboratory quiz due to an extreme emergency that can be documented and approved by Dr. Bloxton, they may take the quiz in another section of Chem 1024 laboratory that is taking the quiz on the same material. Otherwise makeup quizzes are not given. The makeup quiz must be given to the instructor that gave the makeup quiz and the student must pickup the graded quiz from the instructor that gave the makeup quiz. Copying, talking and other forms of communication between students during a laboratory quiz are prohibited. The sharing of calculators, use of information storage devices, cell phones, pagers, PDA’s, and other communication devices and paper and electronic dictionaries during quizzes is prohibited.
MIDTERM EXAMINATION (20%) AND FINAL EXAMINATION (20%): A midterm examination is scheduled for Tuesday 3/10/20 and Wednesday 3/11/20. The final examination is scheduled for Tuesday 4/21/20 and Wednesday 4/22/20. Students are required to take the midterm and final examination in the lab section that they are registered in. If a student misses the midterm or final examination due to an extreme emergency that can be documented and approved by Dr. Bloxton, they may take the midterm or final examination in another section of Chem 1024 that is taking the midterm or final examination. If a student has an excusable reason for missing a midterm or final examination a makeup midterm or final examination can be given. If 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 the midterm or final exam. For an absence to be considered excusable, the student must provide the laboratory instructor with a written documented note, explaining the reason for the absence; whereupon, the instructor will notify the student whether or not the absence is considered excusable. The 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, PDA’s, and other communication devices and paper and electronic dictionaries during exams is prohibited. Students are not allowed to have cell phones and other digital devices such as the Apple Watch on their persons while taking an exam. A student can only take the midterm or final examination once.

LABORATORY REPORTS (50%): Students are required to do labs in the laboratory section that they are registered for. Prelaboratory report sheets are due at the beginning of every laboratory period. The laboratory instructor will check if the students attempted to answer all of the prelaboratory questions and a score will be assigned. These same prelaboratory questions will also be handed in with the rest of the laboratory report and will be graded. Laboratory reports are due the laboratory period after a lab is scheduled for completion. Chem 1024 laboratory instructors will initial the data sheets for the laboratory reports at the end of the laboratory period. These original data sheets are to be turned in as part of the student’s laboratory report. A complete laboratory report includes prelaboratory questions and original laboratory report sheets. Students are to work by themselves instead of with partners or in groups whenever possible. Students that work in larger groups than indicated by the laboratory instructor will lose 25% of the total value of the laboratory report. Students that turn in a laboratory report that they didn’t perform will receive a score of 0% for the entire laboratory report. Each student must turn in their own laboratory report.

MAKEUP LABORATORY SESSIONS AND REPORTS: Students that miss a laboratory due to an extreme emergency that can be documented and approved by Dr. Bloxton, can makeup the missed laboratory in another section of Chem 1024 that is doing the same laboratory experiment as long as there is enough room in the lab section. The lab capacity will be determined by Dr. Bloxton. A student must be prepared to do a makeup laboratory. This preparation includes but is not limited to the following: 1. Having their own safety glasses with them. 2. Knowing what experiment(s) they need to makeup.
3. Having necessary laboratory course materials with them before the start of the makeup laboratory session. 4. Reading laboratory materials before the start of the makeup laboratory session. 5. Completing prelaboratory questions before the start of the makeup laboratory session. Students will receive a score of zero for the initial check of the prelaboratory questions if these prelaboratory questions are not completed at the beginning of the laboratory makeup session. A student must turn in the lab report (from a makeup lab) directly to their lab instructor for the lab that they are registered in.

**Late Lab Reports:** Lab reports are due 1 week after the experiment has been completed at the beginning of the lab period. If a student turns in a lab report late then then is a one week grace period. After this one week grace period a score of zero is assigned for the late lab report.

**DOCUMENTATION OF LABORATORY SCORES:** Students prelaboratory quizzes, laboratory reports, midterm and final examination scores will be recorded on Canvas on a weekly basis. Students need to keep all of their prelaboratory quizzes, laboratory reports and midterm examination 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 1024 laboratory materials until such time that the final grades have been submitted and the scores and final Chem 1024 laboratory grade has been reviewed by the student on Canvas. A score cannot be changed unless the student can supply the prelaboratory quizzes, laboratory reports and midterm examination that are in question.

**PROFESSIONAL EXPECTATIONS:**

**LABORATORY SAFETY:** It is expected that everyone in the lab will conduct themselves in a professional manner. All students are required to wear departmentally approved safety glasses or safety goggles during lab. Students that don't wear or have safety glasses or goggles will not be allowed to work in the laboratory. It is the responsibility of the student to purchase and keep their own safety glasses. Appropriate clothing and shoes are to be worn in the laboratory. Full-length pants are required in the lab; shorts, capris, dresses, skirts, kilts, tank tops, clothing that exposes bare midriffs, sandals, clogs or open toe shoes are not permitted. Shirt sleeves should extend down to at least the elbow. Laboratory coats or laboratory aprons are required items and will be supplied by the Chemistry Department. Anyone who wears contact lenses should inform their instructor; we strongly suggest you not wear them in lab. Any student who is pregnant or may become pregnant during the course of the semester should consult a physician to decide whether or not it is advisable to continue in the course. Any students with any medical conditions that might require special treatment in the event of injury should inform their instructor, so that in the event of an emergency we may respond appropriately. All students are required to purchase, read, understand and sign the Temple University Student and Laboratory Use General Guidelines for CST (Available at University Copy Center 234 Ritter Hall). Students will not be permitted to continue working in the labs beginning with laboratory meeting 3, Tuesday, January 28, 2020, without this signed document. Previously signed documents from past Chem 1024 labs may not be used. A new document is required for Chem 1024 lab.
ABSENCES: Excessive unexcused absences from any part of Chemistry 1024 can result in a student receiving an F as a final grade. 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 laboratory is considered to be disruptive. Therefore cell phones, texting devices and other communication devices should be placed on silent mode and not used during laboratory 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 Wednesday, March 18, 2020. No withdrawal is possible after that date. A student who withdraws from Chemistry 1022 may or may not withdraw from Chemistry 1024. 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 1024. 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 1024 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. Students are not allowed to have cell phones and other digital devices such as the Apple Watch on their persons while taking an exam. 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.

OFFICE HOURS: Office hours for each instructor in Chemistry 1024 will be announced at the beginning of the second week of classes.
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 and academic coaching. 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.

"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. The STEM program is free and open to all students enrolled in this course. More information about 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 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.