

WCSU EVERYDAY CHEMISTRY

SPRING 2025

Instructor: Tom Di Gaetano: digaetanot@wcsu.edu

Office Hours: Online or in-person in the Science Building lobby with appointment

Website: www.scientiaestubique.com

Class Lecture: M/R in SB 124 5:30 – 6:45 pm

Laboratory: M in SB 336 7:00 – 8:50 pm

ATTENDANCE

Regular attendance for both the lectures and laboratory exercises is an expectation. However, everyone knows that life happens, and unavoidable absences may occur. **It is all about good faith efforts.** You are responsible for the work missed due to your absence(s). All work that is assigned / due, must be completed by the due date for a score greater than zero, regardless of your physical attendance, unless other arrangements have been made *in advance*. Poor attendance at lectures is never acceptable but **poor attendance in lab or failure to turn in lab reports** will ABSOLUTELY be a cause for failure.

Lecture: You are urged to keep excellent notes. Guided note packets are provided as hardcopies and online. You are welcome to use them **and are expected to take ancillary notes as the lecture evolves.** It is your responsibility to obtain any missed notes, by interacting with other students, and/or by going to my website: www.scientiaestubique.com to download and complete the formal lecture notes. **I maintain a blog** regarding the major points found in the lecture. It is an expectation that you read each blog entry. I do not use Blackboard. If you wish to know anything regarding your grade, drop me an email, and I will have all that information for you, by the next class – or I can provide that information to you via an email. **My website works best off a computer**, as all notes are in MS Word format. Formatting gets a bit weird on phones or iPads. Once you have a copy of the notes from class, I can then go over those notes with you, via an online meeting or via an in-person meeting.

Evaluations / Assignments: The evaluations are based upon the lecture notes, class discussions, lab work, videos, and assignments. I urge you to turn in any assigned work (even from a missed class), on time. All work will be on my website. Every assignment bears points towards your grade. Do not expect any extension of time or of due date for any assignment, test/evaluation, or lab report. Late work results in a reduction of points, and ultimately a zero number of points. Exceptions abound – so let's agree to work in good faith with each other. I will try if you will.

Major evaluations will be in the form of “take home” exams. You should be prepared for short answer / essay questions. Late work will be assigned a zero. If you feel you have justification for any work being late, it is your responsibility to contact me via email, prior to the due date.

Laboratory: Students need to be aware that there are **no make-up** laboratories. I urge you to make every attempt to attend and to complete each lab. To earn any credit in lab, you must participate in the experiment **and turn in a completed laboratory report**, on time. Missed labs earn a score of 0 points. **Missing any two laboratory exercises is a cause of course failure. Make sure you understand the prior point.**

The Everyday Chemistry laboratory is in SB 336. Goggles must always be worn. The Chemistry Department will provide you with a pair of laboratory goggles. It may be a good idea to keep goggles in the lab, for if you do not have goggles, you cannot participate in the lab. The lab missed under this circumstance would count as a missed laboratory.

The bottom line: Your attendance is expected, but more than that, **your attendance is valued.** The course is designed to help arm you with certain artifacts and habits of mind, necessary to engage in the intelligent and informed dialogue of an educated citizen, regarding biochemical / environmental / chemical issues.

GRADES

Gradings is an expected, appropriate, yet sometimes imperfect activity. Do not hesitate to ask questions about how your grade is calculated or how an grade was assessed. Course grades work on a total-points basis.

$$\text{Your Grade} = \frac{\text{earned points}}{\text{total possible points}} \times 100$$

Your grade is a combination of points earned via lab reports, evaluations, all credit-bearing exercises used during or between the lecture periods, papers, and participation. You should expect graded evaluations, and you are expected to write about chemical issues, using a short answer, and a term paper format. Evaluations will be announced in advance. There are no "pop quizzes" (PHEW!). **See the attendance policy (page 1) of this packet for the remediation policies and procedures regarding missed work.**

Laboratory work is graded, and testable material. Please note that cleaning up of your lab space (lab hygiene) is part of your lab report grade. Five points will be deducted from each lab report grade, for a lab station left in unacceptable condition. You are responsible for following the rules of chemical disposal, lab hygiene and lab compartment.

There are weekly laboratory reports, and they are worth 25 points apiece. Any lab reports turned in past the due date / time, will be worth 0 to 12.5 points, unless you have made appropriate arrangements with me, in advance.

This is a writing intensive course. I am quite willing and happy to help you. Simply ask. In addition to the lab reports, **the course requires a written term paper**, in lieu of a final exam. The term paper is worth 150 points. For organizational help, try Goblin.tools or go to my website. At the bottom of the first tab you will find a number of documents.

General Summary of Points

1 to 3 "Quests"	at approx. 40 to 80 points each
10 lab reports (maximum)	at 25 points each
1 six-page term paper	at 150 points
1 presentation using questions	at 50 points
Participation in 3 presentations	at 50 points maximum
TBA: Various assignments, readings, class work & participation will account for any remaining points. <u>No grades will be curved or scaled.</u>	

Letter Grade Ranges

Letter grades will be assigned on the following percentage basis:

A = 94↑	B+ 86-89	C+ 73-77	D+ 60-64	F = 49↓
A- 90-93	B 82-85	C <u>69-72</u>	D 55-59	
	B- 78-81	C- 65-68	D- 50-54	

For students requiring learning accommodations, AccessAbility Services, has asked us to urge you to visit the office to request those accommodations. They will share with me how I may best with you and your learning requirements. You should do this as soon as possible if you have not yet done so. For this course, **please note that extended time** for all writing assignments has been **built into the course**, with all students benefiting from extended time on writing assignments. Thus, there will be no further time extensions. For example, the 1 week period for lab reports is built into the schedule.

When challenges arise, we can work things out given notice and conversation. *We can make this a very successful learning experience by working as a team.* I believe that fair treatment does not necessarily mean equal treatment – yet at the same time I strive to be an advocate for all my students – those meeting the deadlines and those in need of consideration.

As this is an evening class, normal office hours don't seem to work for my students. Rather than posting normal on-campus hours, **I work to make my availability much more flexible.** Many of you are not on campus for scheduled office hours. With that in mind, I want you to contact me via email for an in-person or FaceTime appointment. We will find a time that works for each of us. My hope is that this flexibility allows me to be of help using a schedule that works for you.

Written Submissions

Written submissions are expected to be accurate, concise, **cited**, logical, *and* handed-in on time. (Timeliness is professional and expected.) **Again, this is a writing intensive course. I can help you!** I also know schedule jams arise. If you fear work will be late, you should contact me to create an action plan, *prior* to the due date. Your contact must be well in advance of the due date or class time. There may be a grade penalty with a few exceptions – but it's better than a zero.

Except for exams, your written submissions (e.g., your term paper and lab reports) **must include** appropriate citations and reasonably correct grammar. You may use any citation format of your choosing. **A lack of citations implies plagiarism and will be treated as plagiarism.** Lab reports and papers without appropriate citations will earn a score of zero points. Plagiarism will be reported. ***Paraphrased* sources must be cited.** When you use whole pieces of a website or text, you should indent the passage and cite the work. **It is not unusual for a lab report or paper to have a dozen or more citations. Do not worry about this.** *Your* original work is how you construct or weave a response as well as in the selection of sources. **No one expects you to know** the GRAS system, or the work of Charles Goodyear, off the top of your head. You need to look these things up and thus, you need to cite your sources. **It is that easy.**

RULE: If you looked it up, you must cite the source!

It is simple, and it is expected!

Copying someone else's work or using AI will earn a score of zero. You are a university student. It is expected you know, as well as follow the rules. You will be held accountable.

With respect to citation, my goal is to simply be able to review the original website or work you cite. Thus, when using internet sources, it is acceptable for this class, to cite a passage, using a shortened URL address embedded appropriately and expanded in a works cited section, so that I can look up the reference. On page 4 of this packet, there are two illustrations of citation which I feel to be wholly acceptable, for our work. **The full and complete URL (universal resource locator) references used should appear in a works cited section of your paper, or lab report,** if you cite with an abbreviated format. Any source found on your works cited page, must be used within the body of your written work. You may include a bibliography should you have other pieces which informed but were not quoted or paraphrased.

Notice that in the following examples, four references have been used, and appear in the works cited. Notice as well, that in one short passage regarding the plant, Kanna, seven citations (using those four sources) appear. This is appropriate, expected and valued! Finally, there is no direct quotation in the following passage, but the passage is a re-wording of readings, thus, each idea/fact is cited. Why is each cited? None of the ideas/facts are original, nor considered to be common knowledge. I had to look up this information. Thus, each requires a citation. Examples are on the following page.

USE THE FOLLOWING AS A GUIDE REGARDING EMBEDDED CITATION(S):

Example 1:

Additionally, Kanna may be classified as a monoamine releasing agent^{1,2}. From this classification it may be inferred that Kanna encourages the release of serotonin (C₁₀H₁₂N₂O)⁴. Hence, Kanna may do double duty in that it can inhibit the re-uptake of serotonin, but it may also encourage the actual release of that neurotransmitter.^{2,3} Kanna may also cause the release of other monoamines, some which are classified as amphetamines, thus affecting mood further.³ However, serious negative effects have not been studied. It is recommended that nursing mothers and pregnant women avoid the use of Kanna.¹

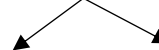
These complete URL addresses should be found on a separate works cited page:

1. <https://examine.com/supplements/sceletium-tortuosum/>
2. <https://www.drugs.com/npp/sceletium-tortuosum.html>
3. https://en.wikipedia.org/wiki/Monoamine_releasing_agent
4. <https://en.wikipedia.org/wiki/Serotonin>

OR you may use a citation system using an embedded, but shortened URL/name of text etc.... **The full URL should appear in a works cited section, to facilitate review by me.**

Example 2:

Notice the use of 2 embedded, and shortened urls



Additionally, Kanna may be classified as a monoamine releasing agent. (<https://examine.com/supplements>, <https://www.drugs.com/npp/>) From this classification it may be inferred that Kanna encourages the release of serotonin (C₁₀H₁₂N₂O) (<https://en.wikipedia.org/wiki/Serotonin>).

Hence, Kanna may do double duty in that it can inhibit the re-uptake of serotonin, but Kanna may also encourage the actual release of that neurotransmitter. (<https://en.wikipedia.org/>, <https://www.drugs.com/npp/>) Kanna may also cause the release of other monoamines, some which are classified as amphetamines thus affecting mood further. (<https://en.wikipedia.org/>). However, serious negative effects have not been studied. It is recommended that nursing mothers and pregnant women avoid the use of Kanna. (<https://examine.com/supplements>)

These URL addresses should be included on a works cited page as complete URLs, so that they may be matched and researched.

1. <https://examine.com/supplements/sceletium-tortuosum/>
2. <https://www.drugs.com/npp/sceletium-tortuosum.html>
3. https://en.wikipedia.org/wiki/Monoamine_releasing_agent
4. <https://en.wikipedia.org/wiki/Serotonin>

Nota Bene: Internet sites are a bit tricky, and I urge you to use only authoritative sites. Acceptable sites include but are not limited to the .gov or .edu sites. When using a .edu site, be sure you are not quoting a student's paper! With respect, a student paper is not considered to be authoritative. Check the references in the works cited section of the student paper, were it just too tempting for you to pass up – or bring me a copy of what you wish to use and ask me for help.

Be careful using most “.com” sites, and avoid using About.com., especially. (There have been so many errors associated with About.com, it is better to look elsewhere.)

As you can see in the above examples, I used drugs.com and examine.com as exceptions to the rule, regarding .com sites because these two sites provide citations for their work. I value such provision and use that fact to help me determine if the website is appropriate to use. I also consider howstuffworks.com & britannica.com as appropriate sites.

Note that I used Wikipedia as a source (primarily for a definition and formula.). However, the use of Wikipedia.com. should be accompanied with least 1 other confirming citation. Wikipedia is good ... but it still has some issues and thus it should not be your sole reference.

Not surprisingly, there are a host of exceptions - be judicious. For instance, were you researching the drug Crestor®, I believe it would be appropriate to use the manufacturer AstraZeneca's website. However, it should never be used as a source for definitive statistics. Such statistics should be verified by an unbiased source from outside of AstraZeneca. The **big idea here** is to use internet sites judiciously, and in the **manner of scholarship**. **If you have a question** regarding the appropriateness of an internet site, **please contact me**. We can talk about it. Your website selection is an integral part of your work. I will happily help you with some of your research. I can work to point you in the right direction.

So, we've covered citations and source selection. But let's talk about what your professor wants out of your writing. Ready?

The playwright George Bernard Shaw once said: ***"The single biggest problem with communication is the illusion that it has taken place."***

Scan the following from the online source *Eating Well* in their published article:

The #1 Ingredient to Add to Tea to Boost Antioxidants, According to Experts
By Elizabeth Shaw, M.S., RDN, CPT Reviewed by Dietitian Emily Lachtrupp, M.S., RD 8/13/2024

From tea's anti-inflammatory properties to its role in promoting digestion, gut health and cardiometabolic health, tea has a plethora of good-for-you properties thanks to the antioxidants in the brew.¹ Antioxidants are compounds that help reduce oxidation and inflammation in the body by scavenging free radicals that can build up over time and promote disease.

Note that the first line is cited. That's a great job. And note that given this is an online article, terms such as: **antioxidants, oxidation, inflammation, and free radicals** may be hyperlinked to provide greater depth of understanding to the reader. However, in truth, only the term *antioxidant* was hyperlinked.

This raises two issues:

- 1) The scientific understanding of the other terms is indeterminate. Has communication occurred effectively? Do you know what the author is telling you?
- 2) My belief is that given the lack of insight into the vocabulary choices, the paragraph **neither informs nor illuminates** the issues for the reader. The article veers wildly to becoming a word salad. *I mean, really, isn't this one reason why you hate reading scientific literature?*

Your writing in this course is to avoid the pitfall. When you use a scientific term, you will structure the paragraph (or the next one) so that the term is defined/explained/given added value. This has at least three marvelous consequences:

- 1) You will be working to ensure communication. The process may not be perfect – but this is school – not paradise.
- 2) You will demonstrate to the reader that you possess a reasonable grasp of the terms. You learn how to integrate a complex issue into your writing. You become the expert. Don't run from becoming an expert. As the Nobel Laureate, Niels Bohr once quipped, *"An expert is a person who has made all the mistakes that can be made in a very narrow field."* That position has always been a comfort to me frankly.
- 3) Your paper automatically becomes longer, more informative, more focused and proves your understanding of the material. It becomes longer without much more research on your part – **rather it becomes longer simply due to you telling the reader what you understand!**

So, let's expand:

From tea's anti-inflammatory properties to its role in promoting digestion, gut health and cardiometabolic health, it is becoming clear that tea has a plethora of good-for-you properties thanks to the antioxidants in the brew.¹ **Antioxidants** are compounds, (substances of two or more different elements) that help reduce oxidation and inflammation in the body by scavenging free radicals that can build up over time and promote disease.

Antioxidants reduce oxidation and the damage caused by oxidation. Oxidation is the loss of electrons from a substance, and in this case, the substances are your proteins, fats and nucleic acids) Antioxidants work by sacrificing their own electrons to radical species.^{1,2,3} So, antioxidants become oxidized instead of your proteins or nucleic acids.

Radicals are a type of unstable chemical with an unpaired number of electrons.³ They may be created due to normal cellular activity, by reacting with oxygen or during the breakdown of food. Radicals may be introduced to the body from environmental pollutants like tobacco smoke, pollutions or pesticides.^{3,4} Radicals damage proteins, fats, and nucleic acids by ripping electrons from them.^{3,4} They are quite able to remove electrons from just about anything to satisfy their chemical instability. As written, such damage to proteins, or to nucleic acids such as DNA may lead to diseases.

Labs & Laboratory Reports: While you write the laboratory report by yourself, you perform the experiments with a partner. Each member of the team is responsible for preparing for the experiments and for turning in their own lab report, **1 week after the experiment was completed.** When a laboratory or a laboratory report is NOT completed in the assigned time-period, a score of zero points will be recorded, unless prior arrangements have been made, with me. **A missed laboratory report counts as a missed laboratory!**

- ☞ You may not participate in lab until a signed safety contract has been returned to me. You receive zero points for any lab missed, regardless of circumstances.
- ☞ Goggles must always be worn in the lab – even when simply sitting at the lab stations, during pre-lab.
- ☞ A complete report will be word processed (typed) and have: your name, the lab title, the objective (found in the lab manual) all necessary data tables, appropriate responses to all assigned questions, citations, and a **lab reflection of at least 4 to 6 sentences which address a critical thinking prompt.** You may use the examples of reflection stems found on page 6, for your lab report.
- ☞ When required, the lab report will state any tabulated or collected results in word-processed tables (e.g. Excel, or MS Word). **Hand drawn graphs/charts are NOT acceptable. I can help you create tables. Just ask!**
- ☞ The assigned questions at the end of each lab report are to be included in the write-up and followed by your response. Thus: **please type out the question and then include your response to the question.** This is part of your grade, and you will receive zero points, should the format be violated.
- ☞ As a word-processed (typed) piece, each lab report will be **double-spaced, cited appropriately** in the **body of the text and have a works cited page, if necessary.** Failure to cite sources is plagiarism. Contact me for help.
- ☞ The report will be handed in the **next week, at the start of the lab period.** A report not handed-in at that time, can be **emailed** to me **within 1 hour** of a lab period ending, for **full credit.** I do not return printed copies of emailed assignments. Any report electronically **received** after the 1-hour period, but by midnight of the due date, begins at 12.5/25 points, unless other arrangements have been made. After midnight, or the agreed to arrangements, the lab report is rated at zero points. A score of zero counts as a missed lab and you may only miss 2!!

- ☉ The first time it appears that a lab report has been copied or is not of your authorship, at any point, the score will begin at 12.5/25 points. Any reports which continue to demonstrate a lack of personal authorship, after the initial warning will bear a 0/25 points for each party. Plagiarized work may earn an automatic score of 0/25 points.

I firmly believe that classmates should discuss the work. The report is not written in tandem, however. At any point, I too will discuss the laboratory with you and help you as best as I may. **Use me as a resource! I can help.**

The points earned by a completed laboratory exercise and report are approximately 30% of your class grade!

Your laboratory report MUST BE patterned along the lines of the following template:

Lab Report Format Summary

Your Name

Title of Lab

Objective of the Lab (found in the lab manual generally in the introduction to the lab – or ask me!)

Table(s) of Results (only when necessary)

First Question: *Type out the question from the manual*

Once the question is typed out, give your answer, proof, settings (**embed citations when you look up info**)

Next Question: *Type out the question from the manual*

Once the question is typed out, give your answer, proof, settings (**embed citations when you look up info**)

Continue with all assigned questions ...

Reflection (see below for help/ideas). Many labs will have a critical thinking prompt. Include this in your reflection.

Double space your report. Include a works cited page when using abbreviated urls in your answer(s) section. When using full urls or footnotes in the Question/Answer section, then you may ignore having a works cited page.

Reflection Stems: You may use the following stem sentences to help you evolve an organized, focused, thoughtful reflection. Use three to four for each of your lab reflections. By no means do you need to, nor should you use them all at any one time. But each reflection should be at least 4 to 6 sentences, discussing your learning/questions/insights... A reflection is to be written for each lab report, in lieu of a conclusion. **You may use these stems for weekly reflections.**

- I was surprised that...
- I think I am strong at ... because...
- I learned...
- I now understand...
- I never knew that...
- The question I still have is...
- Were I to repeat this, I would...
- I still do not get/understand...
- The skill I value most...
- (An) Idea(s) / Concept(s) that helped me from the lab / lecture were...
- What was really valuable to me...
- I thought it was so interesting when ...
- What amazes me...
- I am beginning to connect ideas like...
- I do not agree with...
- I wish I knew more about...
- There is a weakness...
- This issue dovetails with class / my major because...
- I can see why someone would study this because...
- I would re-fine and/or re-design the experiment by... / My work could be improved by ...

TERM PAPER

This course requires a term paper and a presentation on that work. **This term paper is due 17 April 2025.** You must get approval for your topic from me by **the week of 31 March 2025**. Approval of your idea **is graded**. All the rules apply regarding appropriate comportment of a university student, writing papers, citation, plagiarism, accuracy, etc... The final paper is worth 150 points. There is no final exam. The paper is essentially, your “final”. Thus, in the absence of a paper, you will automatically fail the class. Your paper will be returned to use in your presentation, assuming a hard copy was turned in. I will work to apprise you of problems, and of strengths. To have consideration for the full available points, your paper will:

- be on a topic pre-approved by the instructor by the week of **31 March. It's graded!!!!** Speak to me/email me about a topic. **For ideas/topics/possibilities**, check out my website for a list of past approved topics OR find ideas at <http://www.chemistryexplained.com/index.html>
- be written with the instructor in mind as the reader.
- be 6 pages in length (exclusive of a title page, space for citations, diagrams, tables, and/or formal works cited)
- be word-processed, double-spaced, with a font equivalent to Times New Roman 12-point font, with 1” maximum margins on all sides for every page.
- include appropriate equations, vocabulary, formulae of chemicals, tables/graphs/charts of data (be aware that a page of such diagrams or data does not count towards your 6-page minimum unless the diagrams are fully explained.
- be original and written, for this course, use correct jargon and definitions, from the class and your research, and be accurate according to current mainstream scientific tenets.
- have all appropriate citations embedded and matching with a fully researchable works cited page
- be written as a treatise on chemistry, using the ideas learned in this class. (This not a health or psychology paper (etc.), nor is it to be a persuasive piece). **This paper and the following presentation are essentially your final exam.** Hence, you must show me how this course helped you to investigate the topic, by using and defining appropriate vocabulary, citing big ideas, referencing lab work and concepts from lecture.
- be turned in as a hard copy, on time, by the due date.

The 3 Presentations and Participation: The presentation of your work will be explained again, later in the semester. But, in short, **the presentation of your term paper** is worth 50 points and your participation in the presentation process of other students is worth another 50 points (for a total of 100 points). This is run as a seminar. There are no PowerPoint presentations.

These presentations occur on the dates found on the included laboratory calendar (page 10 of this packet). You will not read your paper to the lab group. All you need to do is answer the 5 questions found below. **For full credit (50 points)**, your presentation **must include the answers to the following questions:**

Your presentation will consist of your responses to each of the following questions:

- How does your term paper dovetail specifically with work done in our class over the last semester? (20/50)
(e.g. What is/are; the jargon, ideas, formula, chemical processes, lab work, readings, experiences, discussions associated with your work?)
- What surprises, attitudes, revelations, did you take away with you / learn, from your term paper? (5/50)
- Were you able to attack this issue again, how would the work change? (10/50)
(e.g. What would you wish to learn still / What different direction would you take?)
- What connection(s) / impacts did the topic make with; •your major/•day-to-day life /•education? (10/50)
(You need to identify/discuss the connections to only one area ...not all three)
- What would be one idea you wish the class members to learn from your work, and why is it an important idea?
(5/50)

There are no PowerPoints. You do not read your paper to the class.
You will then field questions from your classmates. (part of a second set of 50 points)

Syllabus

The syllabic topics are selected to; enhance the laboratory work, provide a functional, and basic, chemical vocabulary, engender the habits which lead to successful; researching, reading, interpretation, writing about chemical topics, and of course, enhance student interest. The studied curricular material can be changed to meet the needs and/or interests of class participants.

My goal is to address topics students ask of me - or to shift focus to pursue student interest, as long as the basic tenets of; biochemistry, biophysical chemistry, atmospheric chemistry, environmental chemistry, industrial, and/or consumer chemistry are followed. **I hope to integrate an understanding of basic chemistry into your "everyday life experience" and/or your major area of study. The syllabus will be affected by your expressed interests.**

A good understanding of basic chemistry can; help a marketer design a better campaign, enable an art or fashion student in the selection of materials, help a history major grasp the role of industrialization/discovery/the scientific process as a cause for changes in society, develop a deeper meaning for proper policy development for a lawyer, diplomat, or help a health major illustrate the role of the scientist in the culture, make you a savvier consumer / investor, and help to prepare a parent or caregiver to ask a medical professional appropriate questions for the benefit of their loved ones. For me, a basic understanding of chemistry should include, but is not limited to:

- 1) the Law of the Conservation of Mass, Energy and Charge (Big Idea #1)
- 2) Potential Energy (Big Idea #2)
- 3) the Concept of Charge (Big Idea #3)
- 4) the activity of / changes in the (valance) electrons of metals and nonmetals, in terms of redox reactions
- 5) the general properties of organic and inorganic compounds
- 6) the nature of a chemical bond, and the resulting behavior of matter in terms of intermolecular forces of attractions, reactivity, enthalpy, and entropy. (Big Idea #4)
- 7) the chemical activity of acids and bases
- 8) the fundamentals of what is meant by nuclear chemistry (with Mass Defect acting as Big Idea #5) **or** a discussion regarding nutrition.

SPRING 2023 – EVERYDAY CHEMISTRY LAB SCHEDULE

KEEP YOUR EYE ON THESE DATES	
Jan 27	First Lab
Week of Feb 24	Quest
Week of March 31	Last week for topic selection. By this week you need to have emailed me your topic for the final paper.
Week of April 7	Quest
Thursday 17 April	Final Papers are due
Week of May 5	Quest

MONDAY	WEDNESDAY
JAN 20 NO CLASSES	JAN 22 NO LAB
JAN 27 Safety/ALCHEMY	JAN 29 Safety/ALCHEMY
FEB 03 MEASUREMENT	FEB 05 MEASUREMENT
FEB 10 CHROMATOGRAPHY	FEB 12 CHROMATOGRAPHY
FEB 17 NO CLASSES	FEB 19 NO LAB
FEB 24 WATER ANALYSIS	FEB 26 WATER ANALYSIS
MAR 03 ACID-BASE	MAR 05 ACID-BASE
MAR 10 SOAP PREPARATION	MAR 12 SOAP PREPARATION
MAR 17 SPRING BREAK	MAR 19 SPRING BREAK
MAR 24 POLYMER SYNTHESIS	MAR 26 POLYMER SYNTHESIS
MAR 31 FOOD ANALYSIS	APR 02 FOOD ANALYSIS
APR 07 ELECTROCHEMISTRY	APR 09 ELECTROCHEMISTRY
APR 14 COLLIGATIVE PROPS.	APR 16 COLLIGATIVE PROPS.
APR 21 PRESENTATIONS #1	APR 23 PRESENTATIONS #1
APR 28 PRESENTATIONS #2	APR 30 PRESENTATIONS #2
MAY 05 PRESENTATIONS #3	MAY 07 PRESENTATIONS #3

Note: The **Measurement Lab** requires the use of a Vernier caliper. I will teach you how to use one. Okay?

Note: For the **Water Analysis lab**, it would be instructive to bring in a sourced water sample of your own.

Note: Your participation in each of the 3 presentation periods is part of your grade. Your presence is an expectation of the course.

Western Connecticut State University

Chemistry Department

Laboratory Safety and Work Rules

- 1) Be prepared! Read your laboratory exercise beforehand. Know what possible problems may arise. If in doubt, ask your instructor.
- 2) In case of accident or fire notify the instructor immediately!
- 3) Know where the safety equipment (shower, eye washes, extinguishers, emergency phone, etc.) are located. Know how to use them.
- 4) Proper use of glassware and equipment will be demonstrated. Do not force connections. Follow instructions. If in doubt, ask your instructor.
- 5) You must wear EYE PROTECTIVE DEVICES designated by the department. Do not wear contact lens to lab.
- 6) Do not smoke, eat, drink, or/horseplay in the laboratories.
- 7) Never work alone! Do not attempt unauthorized experiments. Consult with your instructor, if in doubt as to what to do.
- 8) Do not taste or/smell laboratory chemicals unless so instructed. Avoid skin contact of chemicals. Wash hands frequently, especially before leaving the laboratory.
- 9) Be neat! Report all spills to your instructor for instructions on proper cleanup. Wash your work area, and clean up, etc., before leaving laboratory. Check out with your instructor.
- 10) You must wear "closed toe" shoes. Long hair should be contained (fire hazard). Avoid loose, readily flammable clothing. Lab coats, aprons, gloves, etc., are recommended.
- 11) Do not aim boiling liquids at your neighbor. Watch your neighbors! Work "defensively" and cooperatively.
- 12) Do not use broken glassware, equipment, etc. Check with your instructor.
- 13) Discard all wastes as directed in cans, hood, waste bottles, sinks, etc. Wash away with copious water. If in doubt, check with your instructor. Follow instructions!
- 14) Read all reagent bottle labels. Check concentration as well as identify. Do not contaminate reagents. Do not pipette by mouth. Follow instructions.
- 15) Use hood for flammable or/noxious substances.
- 16) Be careful of open flames, electrical hazards, radiation exposure, flammables, toxic materials, gases, mercury, etc. Do not inhale noxious gases.
- 17) Do not weigh chemicals directly on metal balance surfaces. Be neat.
- 18) Do not assume the responsibilities of an instructor. Bring all problems requiring first aid to the instructor. Be prepared for emergency treatment of accidents, however. If faint, lie down. Do not rub burns (thermal or chemical); wash with copious water. Never rub your eyes – use eye wash. If clothing catches fire, do not inhale flame – use showers, fire blanket, or roll on the floor.
- 19) If in doubt, consult with your instructor – ALWAYS!
- 20) Always be safety conscious – of yourself and everyone else!

STUDENT COPY

EVERYDAY CHEMISTRY INTRODUCTORY PACKET ACKNOWLEDGEMENT AND LABORATORY SAFETY AGREEMENT

- I understand the requirements and expectations of the Everyday Chemistry course per the Introductory Packet made available to me as a hardcopy and online. This includes my understanding of the requirements regarding class lecture attendance, reading the blog, citations for written work, timelines, the lab report format and laboratory attendance.
 - I am expected to attend and engage in each lecture.
 - I am expected to complete every assignment to the best of my ability.
 - Each assignment is to be word-processed/typed and handed in as a hard copy on time.
 - Information regarding dates/assignments/notes may be found at www.scientiaestubique.com
 - I am expected to email if I am late, cannot attend, need help and/or have a question.
 - I must cite all sources used to research any work on each lab report, paper, and assignment.
 - Communication is key. I can rework schedules if I provide enough communication and time.
 - I know the lab must follow a particular format.
 - I understand that this is a lab-based course, and two missed labs fail me for the course.
- I know that I can find digital formats of the notes, the introduction packet, class lecture summaries and assignments at www.scientiaestubique.com
- I understand my responsibilities in terms of **attendance, reading, writing reports, citations, due dates, grading** as well as the other aspects of the course.
- I understand that I have multiple opportunities to ask questions about my responsibilities and I understand that I should expect reasonable, timely responses. I understand that I am responsible for fulfilling my responsibilities.
- I realize that I can make appointments with the professor for help, discussion of grades and/or study purposes.
- I have been briefed regarding the safety and work rules of the chemistry laboratory.
- I understand the importance of the rules for the safety and welfare of all the people in my laboratory.
- I recognize that I have the responsibility to observe the lab hygiene, safety, and work rules.
- I understand that it is my job as the student to prepare for each laboratory exercise in advance of the meeting times and that I have the obligation to follow the safety and hygiene procedures while in a chemistry laboratory.

Please Keep this page for your records. Please sign and date the last page of this packet, which is effectively a copy of this page. You will turn the signed/dated last page into me, for my records.

NAME _____ (PLEASE PRINT)

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Student's Signature

Date: