Summer Intensive Chemistry Orientation (SICO-FIT) 2025 **Last modification 7/18/2025**
August 10 – August 16, 2025

Instructor Dr. J. C. Poler, Professor of Chemistry
Peer Mentors: each team gets an undergraduate peer mentor who has been through it before!
Maren Clark (Helium) mclar144@charlotte.edu, Atqiya Nafisa (Copper) anafisa@charlotte.edu, Efupom Fang (Iron) efang1@charlotte.edu, Rolando Perla (Silicon) rperla@charlotte.edu Rakesh Nagamathan (Phosphorus) rnagamat@charlotte.edu, Jay Coleman (Aluminum) jcolem47@charlotte.edu, Anna Pham (Carbon) npham16@charlotte.edu, Faith Shields (Sulfur) fshield1@charlotte.edu,

"Inch by inch, chemistry is a cinch…yard by yard chemistry is HARD"

Participation in SICO 2025 will be through the 2-credit hour Pass/NoCredit course CHEM 3060
Special Topics in Chemistry: Summer Intensive Chemistry Orientation – CRN 12972 - CHEM 3090 - 001

First week in August: Because the cohort is comprised of students in different chemistry classes I will provide the required reading for you. It will be found in our course canvas page.

Friday August 8, 2025
Online engagement – There will be synchronous (1:00 - 2:00 PM online through zoom) and asynchronous engagement the day of the program. You will access these through Canvas, our Learning Management System.

Sunday 8/10/2025
10am-12pm: Welcome Ceremony (on campus) Cone: McKnight & Lucas
12pm-5pm: Move-In Time

Work on some fundamental skills you will need all semester long – **Dimensional Analysis!**
If you didn't already, finish reading the first chapters assigned from your textbook and work through the materials you have been given. Come Monday morning you will be very busy!

Monday 8/11/2025

9:00 – 10:15am	Lecture #2 (NSB 104) "I hope you got some sleep last night"
10:20 – 11:00am	Quiz 0 and review (NSB 104) "setting expectations…this isn't high school!"
11:15 – 1:00pm	FIT Resource Hour (Atkins Library) then Lunch "get to know your team members"
1:15 – 2:30pm	Lecture #3 (NSB 104) "Two lectures is a full week during the semester…"
2:45 – 4:55pm	Group Study session 1 in NSB 104. Work with your peer mentor on some fundamental skills you will need all semester long
5:00 – 5:45pm	Dinner (stay with your team, how many isotopes or allotropes does your element have?)
6:00 – 7:15pm	Lecture #4 (NSB 104) "Three lectures in one day is a crazy, this is SICO…"

Tuesday 8/12/2025

9:00 – 10:15am	Lecture #5 (NSB 104) "I hope you got some sleep last night"
10:20 – 11:00am	Quiz 1 (NSB 104) "now it's getting real…"
11:15 – 12:55pm	FIT Resource Hour (Academic Resources, Woodward 106) then Lunch (do your own thing, just be back on time)
1:00 – 2:15pm	Lecture #6 (NSB 104) "okay, I am starting to get my second wind..."
2:30 – 3:40pm	Group Study session with your peer mentor (TBD)
3:45 – 4:15pm	Quiz 2 (NSB 104) work as a team, help each other succeed!

4:15 – 5:15pm Problem session with Dr. Poler (NSB/TBD) “Review quizzes”
5:15 – 6:15pm dinner (stay on campus) “don’t be late to class, Dr. Poler gets grumpy.”
6:30 – 7:45pm Lecture #7 (NSB 104) “I think I need new calculator batteries…”
8:00 – 10:00pm Group Study session with your peer mentor (New Science Building 104)

Wednesday 8/13/2025
9:00 – 10:15 am EXAM 1 (Chapters E, 1, parts of 4,) (**CHHS 380**)
10:15 – 12:55pm Free time, FIT Resource Hour (Financial Resources, Belk 201) then Lunch
1:00 – 2:15pm Lecture #8 (NSB 104) Team Awards for Exam 1 performance and bragging rights!
2:15 – 3:30pm Y**ou can choose to read/work on your own or just chill if you need a mental health break.** Did you know we have a botanical garden? It’s very relaxing.
3:45 – 5:00pm Lecture #9 (NSB 104)
5:00 – 8:00pm: TBD social activity
Free time “did you know we have a train? Don’t get arrested…”

Thursday 8/14/2025 (Review Chapter 7 and 8 material in textbook)
9:00 – 10:15 am Lecture #10 (NSB 104)
10:30 – 11:00 am NSB 104 Tutorial Services and Peer Assisted Learning (UCAE Rasheda Sykes).
11:00 – 1:00 pm Lunch (stay on campus) Find a new friend, talk to someone you have never spoken to before, get out of your comfort zone…)
1:00 – 2:15 pm Lecture #11 (NSB 104)
2:30 – 3:30 pm Group study (NSB 104) and review text and compare to your notes. You must revisit what you learned, early and often, then work collaboratively on problem sets
3:45 – 4:05 pm Quiz #3 (NSB 104)
4:05 – 5:00 pm Problem session #3: Review quiz. (NSB 104)
5:00 – 6:45 pm Dinner and COFFEE!
7:00 – 9:00 pm prepare for EXAM II. Your peer mentors and Dr. Poler will be there to help you. (NSB 104).
Which team will win the high average on Exam 2? Who will win the award/prize for highest SICO 2025 average?

Friday 8/15/2025
8:45 – 9:15 am Exam II Review session (**CHHS 376**)
9:20 – 10:55 am EXAM II (Chapter 4, 7 - 8) (**CHHS 376**)
11:00 – 1:00 pm FIT Resource Hour at 11:15am (Career & Research Resources, Woodward 106) then Lunch
1:15 – 2:00 pm (NSB 104) **Awards Ceremony** and Pics for your social media
Final announcements and pick up EXAM II from Dr. Poler

Saturday 8/16/2025
1 – 3 pm **FIT Closing Ceremony (Student Activity Center on campus)**

Instructor: Dr. Jordan C. Poler E-mail: jcpoler@charlotte.edu
Office: 143 Burson or online Webex/ZOOM
Group Website: **https://pages.charlotte.edu/poler-research/**
Twitter @DrSciEnCee1
Course Website: http://canvas.charlotte.edu/

REQUIRED
Online free textbook. This is similar to our required textbook. Openstax Tro Atoms First 2e

Scientific/graphing calculator (know how to use the EE button! Use Sci. notation) TI-83 or better – Do NOT use your IPhone calculator!

Course Grade.
You are expected to participate in 100% of all engagements. Missing class, problem sessions, group work, quizzes, exams, or online assignments may lower your grade from **Pass** to No-Credit.

Religious Accommodation: North Carolina law requires state universities to accommodate students having religious obligations that conflict with scheduled class meeting times, including exam periods. If you have any such conflicts this semester, please complete a "Request for Religious Accommodations" form and submit it to your instructor as soon as possible. Requests for the entire semester must be submitted prior to the census date, or at least a week prior to any planned absence that would occur before the census date. The census date is August 9, 2024.

Diversity: UNC Charlotte strives to create an academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

If you have a disability that qualifies you for academic accommodations, please provide a letter of accommodation from Disability Services in the beginning of the semester. For more information regarding accommodations, please contact the Office of Disability Services at 704-687-4355 or stop by their office in 230 Fretwell.

Family Educational Rights and Privacy Act (FERPA): A federal privacy law prevents instructors from disclosing personal grades over e-mail or phone. Questions regarding specific grades cannot be answered over e-mail, and should be brought in-person to the instructor.
Classroom Etiquette: The classroom needs to be an optimal learning environment for everyone. Please be respectful of your classmates by paying attention to the following classroom rules:

- Cell phones should be muted during class time.

- No cell phones or PDAs may be used as calculators during quizzes or exams.
- Laptops, if used, should only be used for taking notes.
- Do not talk while the instructor is speaking or a classmate asking a question.
- Come to class each day prepared to learn. Sleeping in class, reading other material, texting, playing video games, and other such behaviors are not conducive to learning.
- The lecture will start on time each day. Walking in 5, 10 min late significantly disrupts the learning environment. Please arrive to class early and be ready to learn as soon as class starts.

Online Class Etiquette: When we are online, I hope to make the classroom as interactive as possible. Please turn your webcams on for the entire class. Please mute yourself during lecture BUT please unmute and get my attention if you have any question or comments. While I am lecturing it is difficult for me to see the chat box so don't expect me to see your written questions unless I have asked you to submit something that way.

E-mail Etiquette: E-mails must be sent from your official UNC Charlotte e-mail address. As in class I expect that all communication be clear and respectful. I do not read tweets or texts. You should correspond with all faculty and staff as you would any professional. Ask yourself, would this email help me get into a medical or professional school, or get a job?

Learning Resources

- Free tutors are available through the University Center for Academic Excellence (UCAE, http://ucae.uncc.edu/tutorial-services).
- Fee-based tutors are also available. Please e-mail your instructor for a referral.
- Supplemental Instruction (SI) leaders will be holding SI sessions geared toward problem solving. Please check the Moodle course webpage or the UCAE SI homepage (http://ucae.uncc.edu/supplemental-instruction) for information once their schedules have been established.
- UCAE also offers study skills workshops (http://ucae.uncc.edu/learning-lab-study-smarter-workshops) to work on procrastination, test anxiety, note-taking, and exam strategies.
- ChemReview (www.chemreview.net) has written tutorials and problems to solve and is available for purchase.

Stress Management and Test Anxiety

- If stress is no longer a motivating factor and prevents you from working, see the Counseling Center (http://www.counselingcenter.uncc.edu; 704-687-2105).

Course Topics

Chapter E	units, properties of matter, density, dimensional analysis, significant figures
Chapter 1	history of atomic theory, subatomic particles
~~Chapter 2~~	~~waves, photons and photoelectric effect, Bohr model, quantum mechanical model~~
~~Chapter 3~~	~~effective nuclear charge, atomic/ionic radius, ionization energy, electron affinity~~
Chapter 4	ionic bonding versus covalent bonding, formulas for compounds, molar mass
~~Chapter 5~~	~~electronegativity and bonding, lattice energy, Lewis structures, VSEPR~~
~~Chapter 6~~	~~hybridization, molecular orbital theory~~
Chapter 7	chemical equations, stoichiometry, limiting reactants
Chapter 8	electrolytes, concentration, precipitation/redox/acid-base reactions, titrations
~~Chapter 9~~	~~heat and work, enthalpy, calorimetry~~