Biology & Chemistry Tutor Training
FALL 2020

❖ CLAS WELCOME & ORIENTATION
WED 9/30, 10-11 am
- Meet the CLAS staff & join the discussion
- Union Orientation: 11-11:30 am (New Tutors only)

Zoom Registration: https://ucsb.zoom.us/meeting/register/tJ0rd-mhrzwsE9V4bHah5ggpdS3pIRFWjh6y

❖ TRAINING SESSION 1
WED 9/30, 1-3 pm
- Intro to responsibilities

❖ TRAINING SESSION 2
SAT 10/3, 1-3 pm
- Info on teaching strategies

❖ TRAINING SESSION 3
FRI 10/9, 3-4 pm
- First week follow-up

❖ TRAINING SESSION 4
TBA
- Fall Quarter wrap-up

Zoom Link for all 4 sessions: https://ucsb.zoom.us/j/92608399690

At CLAS, Learning is our middle name!
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TUTORIAL GROUPS
Supplementary instruction available in many large introductory courses for Math, Physics & Engineering: Biology & Chemistry; and Economics & Statistics. Groups aim to help students understand key concepts, develop methods for independent work, and prepare for exams.

DROP-IN SERVICES
Individualized help on a first-come, first-served basis
- Biology & Chemistry Drop-in
- Economics & Statistics Drop-in
- Math, Physics & Engineering Drop-in

Come.
Learn.
Achieve.
Succeed.

WRITING & LANGUAGES
Drop-in and Appointments
Individual help with any piece of writing at any stage of the process.
Languages Drop-in
Available for Spanish, French, Italian, German, Russian, Japanese

ACADEMIC SKILLS
Workshops - Fun & useful sessions on how to do school better. Topics include time management, lecture & reading strategies, exam strategies and GRE prep. Sessions specifically designed for international students also offered.
Consultations - Individualized & personal help improving study habits and

At CLAS, Learning is our middle name!
Learn more at: clas.ucsb.edu
Sign up at myclas.sa.ucsb.edu

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TUTOR RESOURCES
Tutor Handbook - posted online
CLAS Tutor Resource page - Link
Study Skills Handouts - Link
Mentors and their materials!
CLAS Services are available to supplement your learning!

- **Tutorial Sessions** include **videos, worksheets & quizzes**. Sign up and participate to **review** major course concepts, **practice** concept applications and get your **questions** answered.

- **Drop-in/Study Hall Sessions** allow opportunities to **practice** **problem solving**, **ask questions** and/or see what other students are working on.

At CLAS, Learning is our middle name!

Learn more at: clas.ucsb.edu
Sign up at: myclas.sa.ucsb.edu
CLAS Mission

At **CLAS**, learning is our middle name:
- we help students understand course concepts;
- we engage students in the learning process;
- we guide students toward discovering solutions to problems;
- we encourage students to become independent thinkers & life long learners.

**Come.**
**Learn.**
**Achieve.**
**Succeed.**
A Tutor’s Role

Tutor as Advocate/Tutor as Midwife

When Plato first used the metaphor of midwifery to describe education, he linked tutors to their role as advocates for students. The tutor is not a lecturer, nor a grader; instead the tutor is one who draws out (e ducare) and helps give birth to what the student has gestated. The success of a tutorial depends on the relationship the tutor establishes with the student. Collaborative problem solving works only when the tutor and student share the responsibility for the learning.

This means that the tutor resists “giving answers.” Being directive upsets the balance of power in a tutorial by establishing the tutor as the center of the learning process and pushes the student deeper into passivity and dependency. The tutor who gives the student her idea or solution is like the cow bird who lays its egg in the songbird’s nest. All the energy of the tutorial goes into supporting the birth of the tutor’s idea. Although the student may receive an ”A” in the course, the student will have been diminished by the experience. What inflates the tutor deflates the student.

The tutor can foster independent learning by

• letting students do what they can for themselves
• recognizing & praising any step they take toward independence
• refusing to let students credit the tutor with their success
TUTOR RESPONSIBILITIES

- Communication
- Drop-in Tutoring
- Timekeeping & Payroll
- Appropriate Attitudes, Behaviors & Etiquette
- Professional Ethics
Communication

With CLAS Staff

*Check your email often (at least twice daily) for vital messages & updates*

*You need to let us know anything regarding*…

• Any schedule changes
• Cancellations or Tardiness
• Problems with your online technology

With Professors

• Initial introductions and continued dialogue are important
• Be an effective and diplomatic CLAS ambassador

With Students

*Be clear & thorough*…

• Regarding cancellations & other changes
• Regarding CLAS policies
• Regarding Professor & course policies
Tutoring Responsibilities & Guidelines

Drop-in Tutorials

General tasks:
- Provide support on difficult concepts & problems
- Provide applicable problem solving & learning skills strategies
- Provide a friendly & comfortable learning environment

Prep & Organization
- Remain apprised of course content, progress & emphasis... attend lectures, check out course mentor’s materials
- Start sessions early to set up your screen & materials
- Allow for student participation

Administrative Reminders:
- Fill out your Kronos timecard accurately and on time
- Check email often; respond promptly
Online Drop-in Tutoring

When starting your Zoom tutoring session:

- Open any documents that you might need to reference (periodic table, SRP table, practice tests, etc.), so they are readily available on your desktop.
- Click the “start this meeting” button in zoom. *Optimally you will want to join the meeting 5 minutes in advance to get set up*
- Click on manage participants - Unmute everyone or change settings to whatever your preferences may be.
- Choose “Enter Chime” so you will know when students are waiting.
- Share the whiteboard.
- Add a welcome greeting to your whiteboard.

During your Zoom tutoring session:

- Allow students to enter from the waiting room on the Manage Participants function.
- Students might not know how to share a question so you’ll have to walk them through that - if they do share their question then you can annotate on their share - if they don’t share you can annotate on the whiteboard.
- Use the Zoom Annotate feature to demo something, point to something, or take a note for the student *(Sometimes the bar is hidden and you need to hover towards the top of the screen by the meeting ID.)*
- If the student has a complex problem or question, you can ask them to screen share a copy of it.
- NOTE: Screen share is automatically turned off for participants. Once you know it is a valid student, you can turn it back on. Try Clicking Security!
- Click on the end meeting button when your session is over.
During your Zoom tutoring session:

- Use the Zoom Annotate feature to demo something, point to something, or take a note for the student. (Sometimes the bar is hidden and you need to hover towards the top of the screen by the meeting ID.)

- Click Annotate!

- Annotation Tools
During your Zoom tutoring session:

- If the student has a complex problem or question, you can ask them to screen share a copy of it.

- NOTE: Screen share is automatically turned off for participants. Once you know it is a valid student, you can turn it back on. Try Clicking Security!
Tutoring Responsibilities & Guidelines

Tutoring Don’ts

Some things a tutor should never do:

• Violate the professor’s policies

• Take the place of the professor or the professor’s lecture

• Complete the student’s homework or assist on an exam

• Try to rescue students that haven’t been attending lecture or studying regularly
Timekeeping & Payroll

• An Online electronic system (Kronos) will be used to track hours worked for payroll.

• Tutors will enter hours worked each week including drop-in, training meetings and lecture attendance.
  • Regular hours = drop-in hours → no comment required
  • Other hours = training hours, lecture attendance → comment required
  • For Lecture attendance:: 50 minute lecture is entered as 1.0 hours; 75 minute lecture is entered as 1.5 hours

• At the end of each bi-weekly pay period tutors finish entering their hours worked and approve their timecards by that Saturday. Please do this on time!!!

• Paychecks are issued bimonthly on every other Wednesday. You will receive your paycheck through the mail or via direct deposit.
Attitudes & Behaviors

Guidelines for working with students & colleagues:

• Use active listening skills & constructive criticism
• Respect other people’s time: Be on time, leave notice if you’re going to be late; end sessions on time
• Be honest: Tell students if you don’t know the answer to a question
• Use courtesy & diplomacy when interacting with professors: Heed their requests & suggestions... Remember it’s their class!

Setting up a comfortable environment is even more important when tutoring online. Just asking a simple question like “How are you?” or “How are your classes going?” can help you to make a connection with your students, setting them at ease. Patience and kindness go a long way!

Online Etiquette

Guidelines for working online during Drop-in

• While on the clock, you must be present at your device and ready to accept students at all time.

• Set your Zoom to make sound when new participants want to join your meetings to help keep your alert and aware.

• Minimize distractions during your sessions
  • Silence your phones and other devices with notifications. Do not play music or ambient sounds. Close doors and windows.
  • Do not eat (drinking water is okay).
  • **Be mindful of what is in view of your webcam.** Keep your surroundings as clear from distracting personal items as possible, especially of anything that could be perceived as inappropriate for a workplace environment.
As a representative of CLAS, tutors are expected to exhibit professionalism in both attitude and conduct. In general, any behavior that makes a student or colleague uncomfortable probably violates CLAS (and University) policies.

The following policies and guideline about specific issues and situations aim to ensure that CLAS staff and students using CIAS services treat each other and CLAS equipment with respect:

**Photocopying**
Tutors may use photocopy machines for CLAS related material only. Students are not permitted to use these machines and should be referred to photocopy facilities in the library or UCen if they need to make copies. Tutors are encouraged to keep copying to a minimum and reduce and use double-sided copies as much as possible.

See your Coordinator for a copier login code and refer to the handout guidelines outlined in this handbook.

**Computer Use**
Computers, including internet access and E-mail accounts, should be used primarily for legitimate CLAS business. Do not download and print internet files that are not CLAS related. CLAS computers & printers are not for accessing and printing personal homework assignments or other materials that are not directly related to CLAS. Under no circumstances is internet access to be used for accessing or receiving inappropriate material (i.e. material that is disparaging, vulgar, obscene, or otherwise reasonably understood to be objectionable).

**Private Tutoring & Private Enterprise**
Private tutoring presents a potential for conflict of interest with the university and as such CLAS staff & tutors may not make any private tutoring referrals or use their position to solicit business for private tutoring. Any private tutoring or related activities must take place outside of CLAS time in non-university locations and not utilize CLAS resources such as computers, copiers, handouts, office supplies or equipment.

Violation of these policies will lead to dismissal from CLAS.

**Alcohol & Drugs**
As stated in the University policy on substance abuse, the University recognizes drug and alcohol dependency as treatable conditions and offers educational and counseling assistance to employees and students to aid them in dealing with the problems associated with substance abuse. Employees and students, however, are prohibited from the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance and/or alcohol in the workplace, on University premises, at University activities, or on University time. CLAS policy, in keeping with this University policy, strictly forbids the serving of alcohol and/or controlled substances to students by tutors on or off campus, during or after working hours.

**Sexual Harassment**
Federal, state, and local law as well as University policy prohibit sexual harassment, defined as unwelcome conduct of a sexual nature, or demeaning, aggressive or hostile conduct targeting a person because of his/her gender that unreasonably interferes with learning or work. This conduct can be physical, verbal, or visual and constitutes sexual harassment when there are situations of “Quid Pro Quo”, “Hostile and Intimidating Environment” or “Preferential Treatment”.

Before making any comments or gestures which might be construed as offensive, tutors should consider both the individual(s) to whom the comments are directed as well as in whose presence the comments are made.

**Diversity**
In support of the University’s twin goals of excellence and diversity, CLAS policy prohibits any discrimination on the basis of gender, race, ethnicity, socio-economic status, age, sexual orientation, or disability.
TEACHING TECHNIQUES

• The Socratic Method
• Learning & Learning Styles
• Problem Solving & Drop-in Techniques
THE SOCRATIC METHOD

A teaching tactic for fostering critical thinking where the focus is on asking questions, not giving answers

Enhances student learning by:
- Reinforcing understanding
- Correcting misunderstanding
- Providing feedback
THE SOCRATIC METHOD

When applying the Socratic Method the questioner should:
- Keep the discussion focused & stimulate discussion with probing questions
- Periodically summarize what has and has not been dealt with or resolved
- Draw as many students as possible into the discussion

Asking questions promotes participation in the pursuit of knowledge, but the wrong approach can hamper this.

Some blocks to effective questioning include the following poor question types:
- Yes/no questions (be more specific)
- Ambiguous questions (be clear, not rambling)
- Leading or railroading questions
- Compound questions with too many factors at once (ask one straight forward question at a time)

Other blocks to effective questioning & interaction include:
- Not allowing students sufficient time to process the question asked (use “Wait-time” which is allowing at least 5-10 seconds for students to respond. Harder questions may require longer wait-time)
- Acknowledging correct answers too quickly and ending contemplation of the question for the rest of the group (ask for other responses, redirect the question to another student, ask others to build on previous comments)
- Not acknowledging responses and dignifying errors (you want to emphasize that making errors is not a reflection of self worth and that making mistakes is a valuable part of the learning process)

In general a questioner will want to employ the following during the course of the session to encourage participation:
- Acknowledge all responses as a contribution regardless of accuracy (Make sure each student comment is greeted with some gesture: a smile, a nod, or something verbal such as “good” or “I see what you mean”)
- Show that you’re are pleased when you get a response……any response
- Look for chances to give positive feedback and praise
- Guide the student toward the correct answer (don’t just point out incorrectness)
- Look for chances to refer back to earlier answers & contributions and weave them into the current discussion
- Make sure complete correct answers are eventually provided
THE SOCRATIC METHOD

How the questioner proceeds with the discussion of course depends on the responses given by students. Note the following situations and techniques.

When students provide right answers during discussion keep in mind the following:
• A right answer must be correct and complete
• If the student is fishing for an answer, get a commitment before you respond
• It’s appropriate to praise students for correct answers (be sincere!)

When students provide the wrong answers be sure to do the following:
• Correct student’s work without being discouraging
• Never make fun of any answer
• Resist the urge to respond to errors by saying “No” or “Wrong” (this can discourage participation and squelch enthusiasm; focus on what is needed rather than what is lacking)
• Give clues and hints to help lead the student to discover the answer
• If the answer is partially right, but incomplete, redirect the question to other students to build on the initial answer
• Dignify an erroneous response by indicating what question the answer is correct for and then clarify why it is not correct for the question you asked (“That would be correct if X were true, but this is different because of Y” or “I can see why you might think that because the terms are easy to confuse, but keep in mind we are talking about Z right now”)

If students don’t answer at all you can try the following:
• Calmly ask the question again. Be encouraging
• Give a hint &/or ask a different question that will lead to the same answer
• Don’t make an issue of the resistance to answer (be patient, but persistent)
• Have students think out loud or look up answers rather than say or do nothing
How do students learn? Here's a visual breakdown of what is generally retained:

- **Passive Modes**
  - Lecture (5%)
  - Reading (10%)
  - Audio Visual (20%)
- **Active Modes**
  - Demonstration (30%)
  - Discussion Group (50%)
  - Practice By Doing (75%)
  - Teaching Others (90%)

*“I hear and I forget. I see and I remember. I do and I understand.” - Confucius*

*“Tell me and I forget. Teach me and I remember. Involve me and I learn.” - Benjamin Franklin*
SOME BACKGROUND ON LEARNING

• What about Learning Styles?

Different people have different approaches....

MY BUTT HURTS!

WHAT?
Three Major Styles or Preferences

- Be aware of the different styles when tutoring

- In general it is best to have a well-rounded tutorial presentation incorporating multiple styles

- Say it, write it on the board, diagram it and demonstrate it!

Visual

Visual learners will typically retain more information when they can see something that graphically depicts what they are trying to learn. Visual learners should study using visual aids whenever possible. Flash cards, pictures, drawings – anything that will give them a visual memory.

Physical

Physical learners will retain information when they use the “hands-on” approach – like labs and demonstrations.

Auditory

Auditory learners will retain more information when they hear something. For auditory learners the best way to learn is to hear something... over and over. Use a tape recorder. Read out loud. Have a friend quiz them orally.
STUDY SKILLS

• Integrate study & test taking tips into your sessions where possible...especially for freshmen
• Be prepared to help freshmen with basic math or using their calculator
• Note that CLAS offers workshops and individual appointments for Study Skills. Schedules are available online.

• Links to handouts on learning strategies for students

https://sites.google.com/site/clasbiology/home/learning--study-skills
TEACHING PROBLEM SOLVING

Most math & sciences courses tutored at CLAS are problem based, so being able to teach good problem solving strategies is important.
TEACHING PROBLEM SOLVING

• Explain why the problem is interesting, important or relevant
• Teach how to derive formulas & identify their parts
• Use a step by step approach by asking small questions along the way *(Guided Practice)*
• Ask students to suggest a proposed method for solving when you begin...“How should I start this problem?”
• Consider demonstrating how to solve the problem 2 different ways
• Allow sufficient practice: follow up with problems for students to try on their own *(Independent Practice)*
TUTORIAL SESSION PREPARATION

• Attend Lectures
  • Take note of vocabulary & specific notation used...be consistent with the professor
  • Be thinking about what questions students may have on the material presented in lecture

• Provide Visuals
  • Use drawings & diagrams to help convey information
  • Use props if appropriate...molecular models are helpful for some chemistry topics

• Be Creative
  • Use analogies, mnemonics and real life examples to aid explanations

• Think on your Feet
  • Be flexible... if what you are doing is not going well improvise as needed
HAPPY TUTORING!

Good luck this quarter and don’t forget to ask for help when you need it!

Your Coordinator and Mentors are here to support you and ensure your success.