

Instructor Observed:	Golonski	Observing Faculty:	Biaglow
Time:	0950-1105	Course/Subject:	CH101/Stoichiometry
Date:	10/9/25	Number of Cadets:	17
Students Were:			
<input checked="" type="checkbox"/> Working independently at their desks <input type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input type="checkbox"/> Taking a test <input checked="" type="checkbox"/> Other: Taking instructor quiz, doing board problems, listening to a cadet presentation.			
Instructor was:			
<input type="checkbox"/> Lecturing <input checked="" type="checkbox"/> Facilitating a question-and-answer sequence <input checked="" type="checkbox"/> Demonstrating a concept <input checked="" type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input checked="" type="checkbox"/> Other: Listening to cadet presentation.			
Assessment:			
Technical Mastery (0-3): 3			
Presentation Style (0-3): 3			
Classroom Decorum and Control (0-3): 2			
Comments:			
<p>Strengths: Classroom demeanor, demo, quiz, and interactions during boards were all strong. Use of Wacom tablet and cadet presentation were particularly strong and noteworthy.</p> <p>Instructor Quiz: Problem 3: "You have 1.651 g of Ag and 0.1224 g of O..." This is not worded well. It should be ""You have a substance containing 1.651 g of Ag and 0.1224 g of O...". Problem 4: "equulin" is an interesting name. Ask them what they think it means and then should where it came from (horses). Use of AI: I typed problem 3 into Google AI and it came up with the right answer. Show this to them.</p> <p>H2 balloon demo: Safety: Investigate safe sound levels. I think it is about 135 dB. High noise levels can damage ears. There is a "decibel meter" app for android. Try it out (it may not be fast enough). Don't insert lit match. Insert an unlit match into pointer then light it. Scientific inquiry: You were visibly excited when you saw the water on the blackboard and did a nice job of pointing it out. I suggest more scientific inquiry. Try 3 balloons, H₂, O₂, and 2:1 H₂:O₂ (carefully). Also, why is O₂ in excess? Flame is yellow, indicating "fuel rich." Research hydrogen-oxygen balloon demo and look at videos such as https://www.youtube.com/watch?v=Yfowv3-3mJE. Discuss this in the context of "engineering a better bang."</p> <p>Continued on the next page.</p>			
Received by:	GOLONSKI.ELIZABETH.SONDRA.1405351338	Digital Signature:	Digitally signed by GOLONSKI.ELIZABETH.SONDRA.1405351338 Date: 2025.10.10 09:50:06 -04'00'
Date:	10/10/2025		

Addition Questions and Prompts for Discussion: Checked items are for discussion with instructor.

- Did the instructor state the learning objectives?
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)?
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes?
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result?
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts?
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own?
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort?
- Were the cadets well-behaved? If not, how did the instructor respond?

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

Background and Bigger Picture: I think your discussion of stoichiometry could use more. Obviously, we want to know how to balance reactions, and you said this. But discuss why are we studying stoichiometry. Tell the cadets why this is important. There is a cultural/economic/engineering connection. For example, a great lead in to this lesson is the Haber-Bosch Process. Consider adding historical perspective. For example, British intelligence estimated prior to WWI that German nitrate reserves would last a few months, without which they could not manufacture fertilizer for food or ammunition, leading the government to believe the war would be over by Christmas. Prior to the war, Germany imported most of its nitrates from saltpeter mines in Chile. Thus the British thought that an effective naval blockade should end the war in months. However, they grossly underestimated the abilities of German industrial chemists.

Stoichiometry Word Meaning: This is definately a weird word. From google, searching "etymology of stoichiometry," I find the following: The word "stoichiometry" comes from the Greek words "stoicheion" (meaning "element") and "metron" (meaning "measure"). Thus, stoichiometry literally means the "measure of elements" and refers to the quantitative relationships between reactants and products in a chemical reaction. The term was first used by German chemist Jeremias Richter in 1792 to describe the measurement of the quantitative proportions in which elements combine to form compounds. In essence, stoichiometry uses balanced chemical equations to calculate the amounts of substances involved in a chemical reaction, helping to understand how much of a reactant is needed or how much product will be formed.

Self-reflection: You are already a great instructor. To improve even further, I want you to video yourself doing a lesson. Have a friend record a lesson on a video camera and then watch it yourself. Or you can video yourself with your laptop and OBS Studio, but doing it with cadets is better. Watch for presentation style, affects, mannerisms, and interactions with cadets. I'd be happy to watch it with you to help you see things.

Classroom Decorum: We are trying to teach cadets to brief their boards. They should not brief their boards using their finger as a pointer. If you can, it would be good to get a small laser pointer and let them use it.

Instructor Observed:	COL Corey James	Observing Faculty:	Dr. Biaglow
Time:	10:35-11:50	Course/Subject:	CH363
Date:	30 October 2025	Number of Cadets:	12
Students Were:			
<input type="checkbox"/> Working independently at their desks <input type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input type="checkbox"/> Taking a test <input type="checkbox"/> Other: [REDACTED]			
Instructor was:			
<input checked="" type="checkbox"/> Lecturing <input type="checkbox"/> Facilitating a question-and-answer sequence <input type="checkbox"/> Demonstrating a concept <input type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input type="checkbox"/> Other: [REDACTED]			
Assessment:			
Technical Mastery (0-3): 3			
Presentation Style (0-3): 3			
Classroom Decorum and Control (0-3): 3			
Comments:			
<p>Discussion of Rmin - Show feed and q-lines in non-ideal whiteboard sketch to make this more clear. Do the cadets know what you mean by "symmetric" X-Y diagram? What is the axis of symmetry? I use an "origami" approach to show this by folding paper.</p> <p>Since you are reviewing, there are some good opportunities for additional review. I suggest you also review total reflux and how it gives minimum trays, since that is done in the book example 7.1. Also, ask the cadets what the stripping and rectifying sections are in the column (above feed, below feed), and why is is called stripping section.</p> <p>You did a great job doing a live demo of CHEMCAD. Great to bring in economics. Discussion was clear. Suggest that you use rules of thumb for pressure and pressure drop. Also, the only thing needed for sizing is pressure. Everything else can be taken as the default values. Show the problem statement at the beginning.</p> <p>Compare the answers. M-T gives 14 stages. SHOR gives 15. Be careful with splits in SHOR. LK split is .968 and KH split is .076. See Mathematica notes attached.</p> <p>(Continued on the next page.)</p>			
Received by:	JAMES.COREY.MA TTHEW.112703866 6	Digitally signed by JAMES.COREY.MATTHEW.1127 038666 Date: 2025.10.31 16:21:34 -04'00'	Date:
		31 OCT 25	

Addition Questions and Prompts for Discussion: Checked items are for discussion with instructor.

- Did the instructor state the learning objectives?
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)?
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes?
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result?
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts?
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own?
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort?
- Were the cadets well-behaved? If not, how did the instructor respond?

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

Show problem solution from the book to compare results with CHEMCAD. You have time to do this. It should be reflection time for the cadets.

So what is it that SHOR cannot do? What is the motivation for using TOWR when it is harder to use? Detailed sizing and costing is not available in SHOR. Hammer this home.

Self-reflection: You are already a great instructor. To improve even further, I recommend that you video yourself doing a lesson. Have a friend record a lesson on a video camera and then watch it yourself. Or you can video yourself with your laptop and OBS Studio, but doing it with cadets is better. Watch for presentation style, affects, mannerisms, and interactions with cadets. You may see things that you want to change.

Otherwise, great lesson. Cadets are clearly respectful, attentive, and very eager to learn about this topic.

Instructor Observed:	Dr. Yuk	Observing Faculty:	Dr. Biaglow	
Time:	1410-1610	Course/Subject:	CH459 Round Robin 2	
Date:	5 October 1025	Number of Cadets:	10	
Students Were: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Working independently at their desks <input checked="" type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input type="checkbox"/> Taking a test <input checked="" type="checkbox"/> Other: Working on projects in the lab 				
Instructor was: <ul style="list-style-type: none"> <input type="checkbox"/> Lecturing <input checked="" type="checkbox"/> Facilitating a question-and-answer sequence <input type="checkbox"/> Demonstrating a concept <input type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input checked="" type="checkbox"/> Other: Working with groups in the lab 				
Assessment: <p>Technical Mastery (0-3): 3</p> <p>Presentation Style (0-3): 3</p> <p>Classroom Decorum and Control (0-3): 3</p>				
Comments: <p>I recommend each group leader conduct a briefing before starting work for each session. Group leader should give an outline of the tasks and who is working on what. They can use their laptops to present a bullet list of tasks.</p> <p>I recommend that each group create a sketch of the flow path for each fluid through the process. In speaking with cadets in class yesterday, I was convinced that they did not understand the flow paths.</p> <p>Ask cadets to comment on the calculated reboiler duty compared to the readout from the screen. They are not the same.</p> <p>The cadets should run both shortcut and rigorous columns for distillation.</p> <p>They are supposed to have a written procedure before starting up. I did not observe anyone using this procedure.</p> <p>(Continued on next page)</p>				
Received by:	YUK.SIMUCK .1591450413	Digital signature details: Digitally signed by YUK.SIMUCK.1591450413 Date: 2025.11.06 09:20:28 -05'00'	Date:	11/06/25

Addition Questions and Prompts for Discussion: Checked items are for discussion with instructor.

- Did the instructor state the learning objectives?
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)?
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes?
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result?
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts?
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own?
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort?
- Were the cadets well-behaved? If not, how did the instructor respond?

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

Project maintenance is a long-term effort that extends beyond the semester. When the semester is over, we need a list of to-do items. Make sure you identify all inoperable sensors. We may need a visit from Mike Winter for the level sensor in the evaporator. The solenoid valve at the bottom that controls the concentrate flow may be sticking.

Cadets should not be relying on manual level measurements in the evaporator when we have a highly automated system. This is sending the wrong message.

The large steam plume arising out of the drain is unsafe and is soaking all of the electronics in the plume.

I noticed a leak below the bottom product receiver in the distillation column.

I did not observe a rubric check with the cadets at the end of the session. This should be done in five minutes with each group near the end of class before the groups are dismissed.

Instructor Observed: Dr. Biallow	Observing Faculty: LTC Cowart
Time: 0950 - C Hour	Course/Subject: CH365 - THERMODYNAMICS
Date: 24 Oct 2025	Number of Cadets: 9 ASSIGNED → 8 PRESENT
Students Were:	
<input checked="" type="checkbox"/> Working independently at their desks <input type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture → ~ 45 min <input type="checkbox"/> Viewing a film <input type="checkbox"/> Taking a test <input checked="" type="checkbox"/> Other: working problem set problems (~ 10 min)	
Instructor was:	
<input checked="" type="checkbox"/> Lecturing <input type="checkbox"/> Facilitating a question-and-answer sequence <input type="checkbox"/> Demonstrating a concept <input checked="" type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input type="checkbox"/> Other:	
Assessment:	
Technical Mastery (0-3):	3
Presentation Style (0-3):	Excellent class, engaging, and professional of cadets.
Classroom Decorum and Control (0-3):	
Comments:	
<ul style="list-style-type: none"> - Good recap of previous lesson and review of slide error of calculation. - Good relationship b/w theory and CH365 operation - Good historical overview of entropy. I liked the physics vs. chem/engg definitions based on free enrgy. - Nice run-through on derivation of equations. - Good wrap-up slide. <p>* CAN ASK: IS THIS PROCESS REVERSIBLE? FOR EX. 5., * CAN HAVE THEM START TO SET UP ONE OF THE EXAMPLES, THEN DISCUSS.</p>	
Received by: Andrew Bragdon	Date: 10-24-25

Addition Questions and Prompts for Discussion:

- Did the instructor state the learning objectives? *No observed.*
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)? *Most of lesson*
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes?
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result?
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts? *Problem set problems and example problems*.
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own? *Yes / Problem set problems*
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort? *YES*.
- Were the cadets well-behaved? If not, how did the instructor respond?
YES.

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

Instructor Observed: <i>MAJ Frey</i>	Observing Faculty: <i>LTC COWART</i>
Time: <i>0950 - 1100</i>	Course/Subject: <i>CH101 - LESSON 28 - APP. OF RXNS.</i>
Date: <i>5 Nov 2025</i>	Number of Cadets: <i>19 CADETS</i>
Students Were:	
<input checked="" type="checkbox"/> Working independently at their desks <input type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture <input checked="" type="checkbox"/> Viewing a film - <i>Voltam cell video</i> . <input checked="" type="checkbox"/> Taking a test - <i>EOH</i> <input checked="" type="checkbox"/> Other: - <i>working example problems at boards</i>	
Instructor was:	
<input checked="" type="checkbox"/> Lecturing <input type="checkbox"/> Facilitating a question-and-answer sequence <input checked="" type="checkbox"/> Demonstrating a concept - <i>Half-cell example problems</i> . <input checked="" type="checkbox"/> Introducing a new concept <i>HALF-CELL REACTIONS, E-cells</i> <input checked="" type="checkbox"/> Reviewing for a test -> <i>Reaction types for EOH Quiz</i> . <input type="checkbox"/> Other:	
Assessment:	
Technical Mastery (0-3): - <i>Good</i> .	
Presentation Style (0-3): - <i>Try to lecture a bit less -> draw out discussion from cadets</i>	
Classroom Decorum and Control (0-3): -> <i>Make the cadets do more... Read off cell potentials, etc.</i>	
Comments:	
<ul style="list-style-type: none"> - WITH INITIAL IMAGE, ASK -> WHAT DOES THIS MEAN? (ANOK / REDCAT) - Good opening w/ ASKING FOR QUESTIONS ABOUT REDOX. - FOR $Zn(s) + Cu^{2+}(aq) \rightarrow$... ASK: WHICH IS OX, WHICH IS RED? - Good example w/ Ag / Pb reaction -> ask lots of questions. - Boards: 1005 working board problems. - Big 1/2 hr "Take boards" and actually working problem. - cadets complete w/ problem when another cadet working same. - Good amount and clarity on cadets at boards. Have a plan for cadets that finish early ... just hanging out, talking. - STARTED "CLEAR/STRAIGHT" AT 1031 -> START 1035. 	
Received by: <i>JRC</i>	Date: <i>12 Nov 25</i>

Addition Questions and Prompts for Discussion:

- Did the instructor state the learning objectives? *Explicitly*
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)? *Backgrounds*
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc. *working at boards*
- Did the activities cover a range of learning modes? *Listening / work at boards*.
- Did the instructor assess learning during the lesson, either formally or informally? *Evaluation*
- If so, did the instructor adjust teaching style as a result? *board work*
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts? *Boards*.
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own?
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort?
- Were the cadets well-behaved? If not, how did the instructor respond?
Misbehavior, noted below.

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

- "K" and "G" → make them use conclusion.
↳ Potassium / iron or chlorine or chlorine dioxide.
- Cadets talking to each other dig board groups.

Instructor Observed: <i>CPT GRUNSKI</i>	Observing Faculty: <i>LTC COWART</i>
Time: <i>0950 3 Nov 2025</i>	Course/Subject: <i>CH101 - L27: REDOX</i>
Date: <i>3 Nov 2025</i>	Number of Cadets: <i>18</i>
Students Were: <input checked="" type="checkbox"/> Working independently at their desks <input type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input checked="" type="checkbox"/> Taking a test - <i>INSTRUCTOR QUIZ</i> <input type="checkbox"/> Other:	
Instructor was: <input checked="" type="checkbox"/> Lecturing <input checked="" type="checkbox"/> Facilitating a question-and-answer sequence - <i>QUESTIONS ABOUT A/B, O.N.</i> <input checked="" type="checkbox"/> Demonstrating a concept - <i>BALANCED EQUATIONS (BY LAW, INTERACTION)</i> <input checked="" type="checkbox"/> Introducing a new concept - <i>O.N. RULES</i> . <input type="checkbox"/> Reviewing for a test - <i>Dog House</i> . <input type="checkbox"/> Other:	
Assessment: Technical Mastery (0-3): Presentation Style (0-3): <i>GREAT REPORT w/ CLASS.</i> Classroom Decorum and Control (0-3): <i>GREAT CLASS, VERY INTERACTIVE</i>	
Comments: <ul style="list-style-type: none"> - STARTED ON TIME; good discussion of TIES / SM INSPECTIONS. - had REACTOR AND/BASE shown w/ DEMONSTRATIONS. - STARTED INSTRUCTOR QUIZ (100%) AFTER GOING THROUGH OBTAIN QUESTIONS. <i>(5 min QUIZ)</i> - Good work on ROTATING REDOX TO BATTERIES. - FOR FLUORINE → -1 IN COMPOUNDS... WHAT ABOUT F_2? - WROTE DOWN O.N. RULES WROTE DOWN [AS A CHECKLIST] - Gave EXAMPLE of $AgNO_3 + Cu(s)$ ↳ <i>Keep going w/ Cu(s) O.N. → THEN OX/RED</i> 	
Received by: <i>[Signature]</i>	Date: <i>3 NOV 25</i>

OX Agent
RED Agent

Addition Questions and Prompts for Discussion:

- Did the instructor state the learning objectives? *shown for current lesson.*
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)? *summarized redox wrt other types of Reacs.*
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes?
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result?
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts?
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own?
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort?
- Were the cadets well-behaved? If not, how did the instructor respond?

Barriers

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

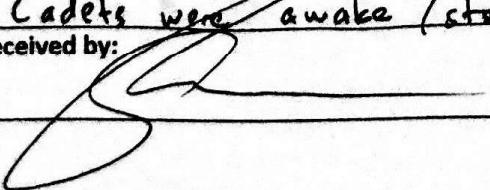
- Remember: O.N. are according methods to defining where e^- went (movement of e^-)
- Be careful w/ oxidizing / reducing agents \rightarrow focus will be the whole compound

Instructor Observed:	MAJ Tobergte	Observing Faculty:	MAJ Lowell
Time:	1410	Course/Subject:	CH101- Sols/Precip rxns
Date:	22OCT25	Number of Cadets:	
Students Were: <ul style="list-style-type: none"> <input type="checkbox"/> Working independently at their desks <input type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input type="checkbox"/> Taking a test <input checked="" type="checkbox"/> Other: Watching a demonstration and taking a quiz 			
Instructor was: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Lecturing <input type="checkbox"/> Facilitating a question-and-answer sequence <input type="checkbox"/> Demonstrating a concept <input type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input type="checkbox"/> Other: Demonstration and Administering a quiz 			
Assessment: <p>Technical Mastery (0-3): <input type="checkbox"/></p> <p>Presentation Style (0-3): <input type="checkbox"/></p> <p>Classroom Decorum and Control (0-3): <input type="checkbox"/></p>			
Comments: <p>Before Class: WPRs returned.</p> <p>Chair/desk set-up: Single cadet in the front row.</p> <p>I liked that you kicked off class by providing a short OPD on "Getting Feedback" from subordinates or supervisors in the Army</p> <p>Reviewing/checking homework/key terms: Using it as a homework check AND chance to review is great!</p> <p>Careful going too deep into weak electrolytes and weak acids/bases without going into Ka/Kb values. Introduce concept and save it for CH102</p> <p>I like the adaptive duration for the quiz (I assume not every quiz is 6 minutes but maybe I am wrong)</p> <p>Lecture included a video of a "cool" experiment.</p> <p>Pre-staged slides (versus writing notes) did you already go over predicting products of a precipitation reaction last lesson?</p> <p>Students started taking notes the moment you started writing on the board.</p> <p>Very good chalk/board contrast. Easy to see.</p> <p>Reduce/simplify the coefficients for a net ionic equation?</p> <p>CDT Andrews NEEDS AI....She said she doesn't... Curious to know how EOH3 goes.</p>			
Received by:	TOBERGTE.LOUIS. SHERIDAN.139598 4523	Date:	10/24/2025

Addition Questions and Prompts for Discussion:

- Did the instructor state the learning objectives?
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)?
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes?
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result?
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts?
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own?
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort?
- Were the cadets well-behaved? If not, how did the instructor respond?

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

Instructor Observed: MAS LOWELL	Observing Faculty: MAS TOBERGTE
Time: 0740	Course/Subject: CH 151
Date: 10/23/2025	Number of Cadets: 16
Students Were: <input type="checkbox"/> Working independently at their desks <input type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input checked="" type="checkbox"/> Taking a test <input type="checkbox"/> Other: Instructor was: <input checked="" type="checkbox"/> Lecturing <input checked="" type="checkbox"/> Facilitating a question-and-answer sequence <input checked="" type="checkbox"/> Demonstrating a concept <input checked="" type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input type="checkbox"/> Other: Assessment: Technical Mastery (0-3): 3 Presentation Style (0-3): 2.5 Classroom Decorum and Control (0-3): 3	
Comments: <ul style="list-style-type: none"> - Good discussion of major selection at the beginning - Thorough IQ with good incorporation of previous lessons - IQ grading scale was a bit difficult to follow <ul style="list-style-type: none"> - recommend cut scale in different color than approved sol'n - Lots of screens in class - about half have textbook up - "A-B-L" big-to-small / old-to-new pattern can help - 4th bullet on slide 14 is hard to understand - Long lecture / moderate engagement levels throughout - Cadets were awake / stood up as necessary 	
Received by: 	Date: 23 OCT 25

Addition Questions and Prompts for Discussion:

- Did the instructor state the learning objectives? Yes
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)? Yes
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc. Yes
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc. Lecture / Questions
- Did the activities cover a range of learning modes? Partial / Yes
- Did the instructor assess learning during the lesson, either formally or informally? Yes
- If so, did the instructor adjust teaching style as a result? Yes
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts? Yes
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own? Yes
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort? Yes - Q/A & Quiz
- Were the cadets well-behaved? If not, how did the instructor respond? Yes

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

Instructor Observed: CPT Stewart	Observing Faculty: MAT Tobangte
Time: 0950 (C2 D2)	Course/Subject: CH101 - LSN 27
Date: 11/4/2025	Number of Cadets: 17
Students Were:	
<input type="checkbox"/> Working independently at their desks <input checked="" type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input checked="" type="checkbox"/> Taking a test - EOH <input type="checkbox"/> Other:	
Instructor was:	
<input checked="" type="checkbox"/> Lecturing <input checked="" type="checkbox"/> Facilitating a question-and-answer sequence <input checked="" type="checkbox"/> Demonstrating a concept - voltage/galvanic cell <input checked="" type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input type="checkbox"/> Other:	
Assessment:	
Technical Mastery (0-3):	
Presentation Style (0-3):	
Classroom Decorum and Control (0-3):	
Comments:	
Great pre-class banter Lots of screens up Colored chalk /labelling or Numbering the steps can be helpful Good problem prepped on the board / Good circulation @ boards Cadets were engaged/excited at boards Slides were solid +2/-2 sign misplaced Great Demo! (Especially the use of the Aver) Good review before the EOH	
Received by: 	Date: 7 NOV 25

Addition Questions and Prompts for Discussion:

- Did the instructor state the learning objectives? ✓
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)? ✓
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes? ✓
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result? Yes
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts?
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own? FoH
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort? Yes - some screens up, but were on
- Were the cadets well-behaved? If not, how did the instructor respond? the textbook
Yes

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

Instructor Observed: LTC Stephen G. Hummel	Observing Faculty: Dr. Simuck F. Yuk
Time: 08:00 to 08:55	Course/Subject: CH350 Bioprocess Engineering
Date: 10/30/25	Number of Cadets: 6
Students Were:	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Working independently at their desks <input checked="" type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input type="checkbox"/> Taking a test <input checked="" type="checkbox"/> Other: Reviewing the learning objectives and major concepts for the AY26-1 CH350 Block 2 by going through a series of problems. 	
Instructor was:	
<ul style="list-style-type: none"> <input type="checkbox"/> Lecturing <input checked="" type="checkbox"/> Facilitating a question-and-answer sequence <input checked="" type="checkbox"/> Demonstrating a concept <input type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input checked="" type="checkbox"/> Other: Reviewing the learning objectives and major concepts for the AY26-1 CH350 Block 2. 	
Assessment:	
Technical Mastery (0-3): 3	
Presentation Style (0-3): 3	
Classroom Decorum and Control (0-3): 3	
Comments:	
<p>The instructor effectively reviewed key learning objectives and concepts for AY26-1 CH350 Block 2, focusing on cell growth, bioreactor design equations, bioprocess scale-up, and process control. Cadets were divided into small groups to work collaboratively on assigned and instructor-generated problem sets. During the session, the instructor facilitated an interactive question-and-answer segment, encouraging cadets to seek clarification and engage deeply with the material. Important theoretical concepts were reinforced on the board, with particular emphasis on critical aspects of bioreactor design and cell growth kinetics. The instructor also circulated among groups, monitoring progress, providing immediate feedback, and offering individualized support as needed. The instructor gave further instruction and clarification on the crucial unit and dimension analysis, too. Overall, the instructor demonstrated strong command of the subject matter and created a highly engaging, student-centered learning environment that effectively supported the achievement of Block 2 learning objectives.</p>	
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Addition Questions and Prompts for Discussion:

- Did the instructor state the learning objectives?
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)?
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes?
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result?
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts?
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own?
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort?
- Were the cadets well-behaved? If not, how did the instructor respond?

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.

Instructor Observed: MAJ Nijel Rogers	Observing Faculty: Dr. Simuck F. Yuk
Time: 09:45 to 10:45	Course/Subject: CH101 General Chemistry I
Date: 10/15/25	Number of Cadets: 17
Students Were:	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Working independently at their desks <input checked="" type="checkbox"/> Working in small, cooperative groups <input type="checkbox"/> Making a presentation <input checked="" type="checkbox"/> Listening to a lecture <input type="checkbox"/> Viewing a film <input type="checkbox"/> Taking a test <input checked="" type="checkbox"/> Other: Watching the chemistry demo (methanol cannon) 	
Instructor was:	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Lecturing <input checked="" type="checkbox"/> Facilitating a question-and-answer sequence <input checked="" type="checkbox"/> Demonstrating a concept <input checked="" type="checkbox"/> Introducing a new concept <input type="checkbox"/> Reviewing for a test <input checked="" type="checkbox"/> Other: Demonstrating the chemistry demo (methanol cannon) 	
Assessment:	
Technical Mastery (0-3): 3	
Presentation Style (0-3): 3	
Classroom Decorum and Control (0-3): 3	
Comments:	
<p>Prior to class, the instructor addressed all homework-related questions from cadets. The section marcher called the class to order on time. The instructor effectively introduced the concept of limiting and excess reactants by engaging a cadet in a methanol cannon demonstration, clearly illustrating the chemical reactions involved. All safety protocols were strictly followed to ensure the well-being of everyone in the room. The instructor reinforced key concepts through a combination of slides and board work, providing multiple examples to clarify limiting and excess reactants. A supportive, question-and-answer environment was encouraged, allowing cadets to seek clarification and deepen their understanding of the learning objectives. Cadets were later invited to the board to apply what they had learned to problem-solving exercises. Overall, the instructor did an excellent job emphasizing the learning objectives and core principles associated with limiting and excess reactants.</p>	
Received by: ROGERS.NIJEL.JAMIL MITCHELL.1405350382	Date: 10/15/25 Digitally signed by ROGERS.NIJEL.JAMIL MITCHELL.1405350382 Date: 2025.10.15 13:17:36 -04'00'

Addition Questions and Prompts for Discussion:

- Did the instructor state the learning objectives?
- Did the instructor provide context (show a link between the students' past experiences and the current objectives)?
- What activities were used to present information or teach skills? Examples include lecturing, modeling, demos, etc.
- What learning modes were used by the cadets during this lesson? Examples include reading, listening, asking questions, solving problems, etc.
- Did the activities cover a range of learning modes?
- Did the instructor assess learning during the lesson, either formally or informally?
- If so, did the instructor adjust teaching style as a result?
- Did the instructor use any guided practice activities to practice the new skills or apply the new concepts?
- Were there any assignments for this lesson that allow the cadets to practice the skills or apply the new concepts from the lesson on their own?
- Were the cadets paying attention? If not, what methods were employed to ensure cadets pay attention and apply effort?
- Were the cadets well-behaved? If not, how did the instructor respond?

Note: The questions in this section are meant to be discussion prompts and not requirements or to form the basis of a cut scale.