

What is "Calibrated Peer Review" (CPR™) and Why Are We Doing It?

Employers often identify communication skills as the most important characteristics of a prospective employee immediately following graduation from college. Your English and technical writing courses don't give you enough practice writing in your discipline. Even classes that assign term papers typically teach more about research skills than writing skills because you get very little feedback. Learning to write well requires regular practice and feedback. Weekly writing assignments are rare because grading large numbers of essays is very time consuming.

In this chemistry class, we will be using a web-based program, called Calibrated Peer Review (CPR). Each CPR assignment will be worth the same as a lab and will appear as a lab grade. You'll get practice and feedback on a regular basis, even in our large class; at the same time you will gain the critical evaluation skills that employers want.

Therefore in our course, we will be assessing your chemistry capabilities in three ways:

- (1) **L**earning facts, scientific concepts/principles, and problem solving, as tested on exams, quizzes and homework,
- (2) **A**pplying the principles of chemistry, as tested in the laboratory and on lab quizzes,
- (3) **W**riting and critiquing your peer's writing on science and chemistry topics, as tested with Calibrated Peer Review (CPR).

Calibrated Peer Review (CPR[®]) is web-based software designed to increase the amount of writing done while teaching other subjects, including chemistry. The program accomplishes this by having you, as students, evaluate each other's writing. Since "peer review" is useful only if you take the job seriously, CPR "calibrates" you by having you first read essays of known quality.

So the process is this:

(1) Time Period A: You will read and/or do the necessary background information on a chemistry-related topic, then write an essay about the topic following guidelines, and submit this on-line through the CPR program. Then wait until Time Period B begins.

(2) Time Period B: You will then be "calibrated" so that we know you can with some expertise be able to recognize a poor essay, a reasonable essay and a good one. After calibration, you will be given 3 of your fellow students' essays to review. This is done anonymously. If you do well at the calibration, your reviews of other students' essays will be worth more. Assignment grades depend on the quality of your own essay, your reviews of other students, and the final critique of your own essay. This means you can write a so-so essay, but still get points because you recognized that you could have done better.

Question 1: This is my first CPR in the class, how do I access my assignment?

- Go to the CPR Login Page (<https://cpr.tamu.edu/cpr/cpr/login.asp>)
- **If you have used CPR before at TAMU, you still need to log in as a new user, because this is a new server.** You will be using your new UIN number - not your social security number. If you don't know it, login to the webpage: myrecord.tamu.edu. It's the number next to your name with 00 in the middle. Omit dashes in your student ID. If you are still having problems, contact Ms. Traci Zaragoza, the Administrator, at fyprgraders@mail.chem.tamu.edu. Please include your Instructor's name and Section in the e-mail.
- **If you are a new user, follow the New Users; First time login link.**
- Select your school from the list.
- Enter your UIN number - the new student ID - DO NOT USE DASHES. If you don't know it, login to the webpage: myrecord.tamu.edu. It is the 9 digit number next to your name with 00 in the middle. **(If the server does NOT recognize your ID, contact Ms. Traci Zaragoza, the Administrator, by e-mail at fyprgraders@mail.chem.tamu.edu. Please include your Instructor's name and Section in the e-mail)**
- Complete your profile by creating a password and a challenge question. The server will give you your CPR username. *Write these down somewhere you can find them. Please choose a challenge question that you CAN remember the answer for in the future.*

You will use this username and the password you created to access all your CPR assignments in ALL your courses at TAMU on the new server. If you are using CPR in more than one course, this username will allow you to access all of them. **If your student ID is NOT recognized by the server, check with Ms. Traci Zaragoza, the CPR Administrator (fyprgraders@mail.chem.tamu.edu) right away - include your Instructor's name and section.)**

The Student Handout is on the back. You can also find it on your instructor's website available through the First Year Chemistry's website at <http://www.chem.tamu.edu/class/fyp> (You'll need Adobe Acrobat Reader.) A good CPR Tutorial, designed by Dr. Ken Chapman, Economics, CSU Northridge, can be found at <http://econ1.csun.edu/cpr/tutorial/default.htm>, called "CSUN CPR tutorial for the first time user."

Question 2: What do I do if I need help in writing my paragraph? (More Hints on page 3)

There are several things you can do. Have a friend read your paragraph or simply read it out loud yourself and see if it makes sense. Write it in a word processing program so you can check spelling and grammar. Ask your TA or instructor to give you some pointers to help guide you. Also there is a University Writing Center in Evans Library. UWC is located on the second floor of the Evans Library in Room 1.210 B. It is open Monday-Thursday 10 a.m. to 10 p.m., Friday 10 a.m. to 2 p.m. or online at <http://uwc.tamu.edu/>. Appointments are recommended, but the consultants will take walk-ins as time allows. You can even submit your paragraph on-line for advice. For more information call (979) 458-1455 or send questions by e-mail to uwc@tamu.edu. For more information, see "How To Do Well On Your CPR Assignment."

Question 3: How do I format my TEXT entry?

You will want to use the minimum of HTML tags in your paragraph, because your work is easier to proof. One suggestion: write your text using a word processor, paste it into the CPR Text Entry box, then add the HTML tags, given at the bottom of the back of this handout. If you make a mistake in your HTML, your TEXT could be "invisible" to your reviewers and you will receive a lower score. Use the PREVIEW button often. If the PREVIEW button isn't working for you, try a different computer - it may be browser sensitive. Here is a link to a tutorial on using HTML with CPR. It was designed by Dr. Steven Verhey, Biology Department, Central Washington University: <http://www.cwu.edu/~verheys/howto.html>. It has more information than you will need here but may be helpful. *You will only really need the tags given in this handout.*

Always save your TEXT entry on your own disk. Be sure to check that you have received confirmation from the server that your text has been submitted. The CPR Administrator, Traci Zaragoza (fyprgraders@mail.chem.tamu.edu) can verify this also. Check the timing for when you will start the reviewing process.

Question 4: The assignment is over, and what does it all mean?

When the assignment END time has passed, you can check your results. To help you understand your results, look at the last page of this handout.

CPR™ Student Handout

Getting Started with CPR:

- You need a browser (Netscape Navigator v. 4/1 later or Internet Explorer v. 4/1 later) and an Internet connection (Bruin Online, EarthLink, etc.).
- You will need to know your CPR Username and your password to access the CPR program. Even if you have already accessed the program in a previous term, you must log in as a New User. This is because we are on a new TAMU server. All New Users **MUST** complete their account profile.

To complete an account profile for a New User:

1. Go to the following URL: <https://cpr.tamu.edu/cpr/cpr/login.asp>
2. Select "New Users: first time logging in?"
3. Select **YOUR SCHOOL** from the pull down menu and enter your new UIN Student ID - not your Social Security number. You can find your UIN number when you log into the website: myrecord.tamu.edu. It's the number next to your name with 00 in the middle. **DO NOT INCLUDE DASHES**. You may have to wait until the administrator gets your ID into the system. Check with your instructor. If there is still a problem, contact the administrator at fypgraders@mail.chem.tamu.edu - include your instructor's name and section.
4. Next, you will select a password. You will also need to enter a challenge question and answer. If you forget your login information, this challenge question will be asked of you to confirm your identity, so choose a question/answer that you will not forget and that others do not know.
5. Next, there is a field to enter your email address; this is optional.
6. Upon completion of your account profile, you will be given your unique **CPR username**. Make sure that you save your **CPR username**. You will need it every time you access CPR.

Before starting your first CPR assignment:

- After entering your *CPR* username and password, you will be directed to take a 10-minute tour of the website.
- Click on the "CPR Guided Tour" link and then the "Taking an Assignment" link- .Take the short PreTest for new users. All information necessary to complete the PreTest can be found in the CPR Tour: "Taking an Assignment." You must take this tour prior to taking the PreTest. If you are a CPR veteran, you won't need to take the tour and PreTest.

Assignment Structure -Both stages are required to complete the assignment. There are two parts to a CPR assignment:

Part A: <begins with Assignment Start Time>

During this stage you will

- a) explore source material about the assignment topic.
 - b) write about the topic. **(20 POINTS)** You can submit your paragraph as many times as you want until the due date.
- <ends with Text Entry End Time>

SUGGESTION: Save your text to your local computer or to a floppy disk before submitting it. This will serve as a backup should a problem occur during the submission process. If you miss the deadline due to technical problems, email Ms. Traci Zaragoza, the Administrator immediately with your paragraph at fypgraders@mail.chem.tamu.edu and she can submit your paragraph for you.

Part B: <begins with Text Entry End Time>

During this stage you will evaluate

- a) three example texts written specifically for this assignment **(30 POINTS)**. These evaluations are called " calibrations." You only have only **two** opportunities to do each calibration, then you must go on.
- b) three texts written by your classmates **(30 POINTS)**. This stage is called "reviews." **BE KIND** in your comments to your classmates.
- c) your own text. This stage is called the "self-assessment." **(20 POINTS)**

<Ends with Assignment End Time >

After the assignment ends:

You can now check your assignment results. For clarification, go see "How to Interpret Your Results" on the last page of this handout. **If you don't agree with your classmates' assessment of your work, please email or visit Dr. Wendy Keeney-Kennicutt (kennicutt@mail.chem.tamu.edu, Rm 116 HELD) and she will reassess your work. Her decision is final.**

To access CPR technical support:

- (1) Check with your instructor or (2) Send email to Ms. Traci Zaragoza, the Administrator at fypgraders@mail.chem.tamu.edu.

If you are a student, include your CPR username, instructor's name, course and section.

Important Points:

- CPR is on a secure TAMU server so the official time is Central time on the server. You can check the CPR time by clicking on the "CPR Time" link on the top of the assignment screens.
- CPR depends on **ALL** students finishing assignments. Problems should be reported immediately to **Ms. Traci Zaragoza, the Administrator** (fypgraders@mail.chem.tamu.edu - **include Instructor's name and section**) to insure the highest possible completion rate by students.
- Always** save your text entry on the local computer, a separate computer, and/or a floppy disk before submitting 'it to CPR.
- Most Internet Service Providers (ISP's, like Bruin On-Line, Earth link, and MSN) terminate Internet connections that have not been used for more than 10 -20 minutes. If a connection is terminated and you try to submit work, it will be **LOST**.
- CPR does **NOT** work with the AOL browser. Make your internet connection with AOL, then switch to the Internet Explorer (4.x or 5.x) or the Netscape (4.7x) browsers.

HTML Tags for formatting your text: They do not count as words IF DONE CORRECTLY. Always check with Preview button.

 text Displays the enclosed text in boldface; Hi gives **Hi**.

<I> text </I> Displays the enclosed text in italics; <I>Hi</I> gives *Hi*.

_{text} Displays the enclosed text subscripted; H₂O gives H₂O.

^{text} Displays the enclosed text superscripted; Na⁺¹ gives Na⁺¹

<CENTER> text </CENTER> Centers the text on the line

 Inserts a line break after the text.

<P> or </P> Inserts a blank line after the text. Always preview your text. If the preview button isn't working, try a different computer.

How to Do Well on Your CPR Assignment

Number 1 - Be aware of the deadlines and don't miss them. It is very important to your score. If you miss the deadline for Part 1, you cannot continue and you will miss 80% of your score! The times are given as Central Time.

(Note: The grading criteria vary from course to course. The scoring presented here is what we are using in the First Year Chemistry Program at TAMU)

There are 4 parts to a CPR Assignment (You are given about 1 week to complete Part A (1) and about 1 week to complete Part B (2,3,4) - see your schedule.)

- Part A Part 1 (20 pts) - Writing your paragraph
Part B Part 2 (30 pts) - Calibrating your skills as a reviewer
Part 3 (30 pts) - Reviewer your peers
Part 4 (20 pts) - Reviewing your own paragraph

Part 1: Writing your paragraph (20 pts).

- DON'T WAIT UNTIL THE LAST HOUR - you may experience technical problems and then it may be too late to fix them.
- If you have any technical problems, contact Ms. Traci Zaragoza (Rm 412 HELD) at fypgraders@mail.chem.tamu.edu - she works 8-5 Monday - Friday.
- Read the information and go to the links - DO THE RESEARCH BEFORE WRITING.
- Your writing should be similar in level to a chemistry textbook written for AP or college chemistry, unless otherwise specified.
- You can resubmit your paragraph as many times as you wish up until the deadline.
- Write in a word-processing program - then paste it into the block. If you take too long writing your paragraph directly on the website, you will be timed out and have problems submitting your text. **KEEP A COPY**, so that if there is a problem, you can resubmit.
- Include ALL the answers to the Guiding Questions in your paragraph, but be sure that your paragraph reads smoothly.
- Make sure you have an introductory sentence.
- Make your sentences "tighter" to get within the word limits. Scientists do not use unnecessary words. It is a real skill to be able to write a summary or abstract. Pick your words carefully. Instead of long sentences with lots of prepositional phrases, use adjectives.
For example: The reaction occurring between acids and bases involves the formation of a salt and sometimes water is also formed.
Rewritten: Acid-base reactions form salt and sometimes water.
- Always check your paragraph using spell and grammar check. The process is not always perfect since most spellcheckers are not set up to read scientific explanations but it helps. Make sure you use complete sentences and that the subject agrees with the verb - plural subjects require the plural form of the verb. Also, if a word is used incorrectly but is spelled correctly, spell check won't find it, but it is still considered to be a misspelling.
For example: The main principal used in equilibria is LeChatelier's Principle.
Problem: "Principal" is the person in charge of a school, the word required here is "principle."
- Have a friend read your paragraph or simply read it out loud yourself and see if it makes sense.
- Ask your TA or instructor to give you some pointers to help guide you.
- Visit the University Writing Center in Evans Library. UWC is located on the second floor of the Evans Library in Room 1.210 B. It is open Monday-Thursday 10 a.m. to 10 p.m., Friday 10 a.m. to 2 p.m. or online at <http://uwc.tamu.edu/>. Appointments are recommended, but the consultants will take walk-ins as time allows. You can even submit your paragraph on-line for advice. For more information call (979) 458-1455 or send questions by e-mail to uwc@tamu.edu. They are aware of CPR and how it is handled.
- Use a minimum of html tags in your paragraph - it makes it easier to read. See other sheet for listing of appropriate html tags.
- BEWARE: If you do NOT submit your paragraph on time, you CANNOT do the rest of the assignment and you lose 80 out of 100 points! If you do miss the deadline - contact ASAP Ms. Traci at fypgraders@mail.chem.tamu.edu. Sometimes, but not always, we can submit your paragraph for you.
- Your grade will depend on your peer's evaluation of your work, but if you think your peers were in error, please contact Dr. Wendy Keeney-Kennicutt at kennicutt@mail.chem.tamu.edu.

Part 2: Calibrating Your Skills As a Reviewer (30 pts - 10 pts per calibration).

- There will be 3 calibrations. You will be given a good paragraph, a fair paragraph and a poor paragraph on the topic (not necessarily in that order). To pass a calibration, you must (a) get most of the style questions correct (65%), (b) get most of the content questions correct (65%), and (c) your overall score of the paragraph must be within ± 2.5 of the rating given by the composer of the assignment. To pass the calibration, you must do well on (a), (b) and (c). You will have 2 chances for each calibration. If you do a good job on your second try, you will still get 10 out of 10 points.
- Be a fair reviewer. Don't think you are doing a favor by grading easy - you will only hurt yourself.
- Content is more important than grammar, spelling and style. It is a good rule of thumb to deduct a maximum of 2 - 3 only on the overall score for bad style, which includes bad grammar, spelling errors, absence of an introductory sentence, etc.
- To check for spelling errors and grammar problems, copy the paragraph into a word-processing program and do a grammar/spell check. The program will catch most of the problems. You can also visit the University Writing Center.

Part 3: Reviewing Your Peers (30 pts - 10 pts per review).

- You will be reviewing 3 of your peers, just like you did the calibrations. In this class, for you to get the full 10 points per review, the score you give your peer's paragraph (out of 10 pts), must be within ± 2.5 of the weighted average rating given by all the reviewers. The scorings made by reviewers who did well on their calibrations will be weighted heavier; the scorings made by reviewers who did poorly on their calibrations will not be given much weight at all. If your rating lies outside ± 2.5 of the average, you will get a 0.
- Be a fair reviewer. Don't think you are doing a favor by grading easy - you will only hurt yourself. On the other hand, don't give someone a terrible grade undeservedly because somehow you think that will help you or the class curve. That person will likely complain about your review to Dr. Keeney-Kennicutt, have the scoring changed and you will lose all your reviewing points.
- Content is more important than grammar and style. It is a good rule of thumb to deduct a maximum of 2 - 3 pts for bad style, which includes bad grammar, spelling errors, absence of an introductory sentence, etc.
- To check for spelling errors and grammar problems, copy the paragraph into a word-processing program and do a grammar/spell check. The program will catch most of the problems. You can also visit the University Writing Center.

Part 4: Reviewing Your Own Paragraph (20 pts).

- To get a full 20 points, your self-assessment must be ± 1.5 of the weighted average given by your peers. To get 10 points, you must be ± 2.5 of your peers' assessment. So, for example, if you wrote a poor paragraph, judged to be a 3.5 by your peers, if you gave yourself a 5.0, you are ± 1.5 of the judgment of your peers and you get 20 points. If you gave yourself a 6.0, you are ± 2.5 of the peers' assessment and you get 10 points. However if you give yourself a 7.0, you get 0 points for your self-assessment.
- Be a fair reviewer of yourself. Many times a person will give themselves a 10, even if they have obvious spelling mistakes. To check for spelling errors and grammar problems, copy the paragraph into a word-processing program and do a grammar/spell check. The program will catch most of the problems. You can also visit the University Writing Center. Of course, you should have done this before your paragraph was submitted!
- Your grade will depend on your peer's evaluation of your work, but if you think your peers were in error, please contact Dr. Wendy Keeney-Kennicutt at kennicutt@mail.chem.tamu.edu. More on the scoring on "Understanding Your Results Page."

How to Interpret Your Results - It's Easier Than It Looks

When the assignment is finally over and you log into your CPR page for the assignment you will see:

If you mastered a review, you received 10 points - if not, you got 0

Here are the scoring parameters for the self-assessment: ± 1.5 for full 20 points and ± 2.5 for 10 points.

Click on "Assign Info" to get information about this assignment.

Click here and see CPR Time - Central Time

Here are the results of the reviews that you did of other students.

Here is the limit of how far you can be away from the average and still have mastered the reviews and received full credit for your reviews of others.

HOME
CPR Time
LOG OFF
Calibrated Peer Review™

Assign Info

CPR Stages

Source Material

Calibration Results

Reviews

Self-Assessment

Results

Reviews You Performed				
Answer Key	Max. Allowable Dev. = 2.5			Overall Grade
Reviews	Rating Deviation			
Review 1	1.00			Mastered
Review 2	0.12			Mastered
Review 3	1.21			Mastered

Reviews Performed of Your Work				
Answer Key				Max. Allowable Deviation = 1.5 / 2.5
Questions	Answers			
	Review 1	Review 2	Review 3	Self-Assessment
1. Does the essay have a descriptive topic sentence? (Does the first sentence of the essay accurately introduce the subject of the entire essay?)	No	Yes		
2. Do experimental procedures accurately describe the experimental procedure?	No	Yes		
3. Is the data presented in a clear and concise manner?				
4. Is the best theory supported by the data?				
5. Do experimental results support the theory?				
6. Is the theory supported by the data?				
7. Is the solution covered?				
8. Do the units use?				
9. Are directions?				
10. Are there any spelling errors in the essay?	No	No	No	No
11. Are there significant grammatical errors in the essay? (For example, run-on sentences or sentence fragments, missing articles, or subject-verb disagreements)	No	Yes	No	No
12. How would you rate this text?	5	7	9	7
Weight Applied to Ratings	0.83			
Weighted Average Text Rating	7.00			

Calibration Scores				
Answer Key	65% Style	65% Content	Max. Dev. = 2.5	Overall Grade
Calibrations	Min. % Correct Style Questions	Min. % Correct Content Questions	Rating Deviation	
Calibration 1	100%	87.5%	0	Mastered
Calibration 2	100%	75%	0	Mastered
Calibration 3	100%	100%	0	Mastered

Questions	Answers					
	Calibration 1		Calibration 2		Calibration 3	
	Inst.	You	Inst.	You	Inst.	You
1. Does the essay have a descriptive topic sentence? (Does the first sentence of the essay accurately introduce the subject of the entire essay?)	No	No	No	No	Yes	Yes

Scores and Overall Grade		
Stage	Performance	Score
Text Entry	Avg. Weighted Text Rating = 7.00	14.00 out of 20
Calibrations	Avg. Calibration Deviation = 0.00	30.00 out of 30
Reviews	Avg. Review Deviation = 0.78	30.00 out of 30
Self-Assessment	Self-Assessment Deviation = 0.00	20.00 out of 20
Overall Score		94.00 out of 100

Click here to see the source material for the assignment again.

Click here to see your calibration results (if you did a recalibration, only the 2nd one is shown). It will look like this. Anything that is underlined is clickable. So, you can revisit the calibration paragraphs, see your answers and the author's answers and click on why the author's made their decisions. Near the top you see "65% Style" and "65% Content" - meaning you must get at least 65% of the style and content questions correct to master the calibration. "Max.Dev.=2.5" means your rating of the paragraph must be within ± 2.5 of the rating given the paragraph by the assignment's author. To master the calibration, you must pass all 3 parts of it. For more details, see the back page, under Part 2.

The small arrow means you are looking at the "Results" page.

Click here to see your peers' explanations of why they gave you the score they did.

This weight factor depends on how well the reviewer did on the calibrations. A person who did terribly on the calibrations has an RCI of 1 (ranges from 1 to 6), a weight of 0 and doesn't affect your self-assessment score.

If any scores appear in red at the bottom after a week or so, then Dr. Keeney-Kennicutt or some other qualified instructor has looked at a paragraph (either yours or your peers) and reassessed it. This may or may not change your final score. If you have any questions, or want your scores reassessed, contact her at kennicutt@mail.chem.tamu.edu.

If the Self-Assessment Deviation is 1.5 or less, you get 20 pts, if 2.5 or less, you get 10 pts, if greater than 2.5, 0 pts.

Your paragraph's score is 2x the rating given it by your peers.

Your total score for the assignment - it will count the same as a lab.