Cal State East Bay
ILO Critical Thinking Assignment Guide
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Why Faculty Should Use This Guide

This guide has been developed by and for faculty in all Cal State East Bay academic colleges to support us in our efforts as effective and efficient instructors. Contributions have also been made by faculty and staff in the Office of Faculty Development and Academic Programs and Services. By applying the suggestions contained in this guide, we are more able to craft assignments that allow our students to clearly demonstrate their achievement of the Critical Thinking Institutional Learning Outcome as it applies to particular disciplines and programs. Course assignments aligned to the ILO of Critical Thinking by the college will be used as part of the assessment process to improve university-wide student learning.

Critical Thinking Assignments

Critical Thinking as a provider of tools: One way to understand critical thinking is as a provider of tools, e.g. the scientific method, textual analysis, SWOT analysis. What tools have you provided for your students and how do you plan to evaluate them? What activities are you asking your students to engage in? How do the tools apply to these activities? Are the students designing an experiment? Are they performing an experiment? Both of these activities use the scientific method, but they do so in different ways. Does your assignment make it clear what tools are to be used and how they are to be applied to the activities?

Tools rely on formalizing information: Most tools rely on formalizing information. Asking students to measure an apple harvest based on the number of apples produced will provide different results than asking them to measure the harvest in volume or weight. These different formalizations (number, volume, weight) will produce different results. What formalizations are part of your assignment? Have the students identified them as formalizations? Are you asking the students to apply their own formalizations? Some formalizations make things easier to achieve but hinder the students' ability to make choices. Making choices is a key part of critical thinking.

Be explicit about critical thinking activities: A good assignment is usually explicit. Is your assignment explicit about activities? Is it explicit about standards? There are different ways to be explicit. You could tell the students to include five peer-reviewed articles from academic journals. This would evaluate the students' ability to follow directions, identify academic journals, and distinguish peer-reviewed articles from those that are not. You could also tell students to provide references for claims that should be supported by references and to treat those references in a manner that is appropriate based on the nature of the source. This is still explicit but instead evaluates the students' ability to identify claims that require references and how to treat different sources. Be explicit in a manner that allows you to evaluate the things that are important to you and your discipline. Remember that if this assignment is being evaluated for the university ILOs, then being explicit also helps your institutional reviewers.

Explain the role of organization: Do you give the students information about how to organize? If the students have flexibility in their organization are you explicit about it? Many assignments involve combining a variety of elements. Do you help your students to scale up their work? Organizing a sentence is different from organizing a paragraph which is different from organizing a paper. Are you evaluating students on their ability to organize? Are you explicit about it? Do you provide tools to help students organize?

Identify audience: Do the students know who their audience is? Have you been explicit about it? How does the audience change their organization and presentation? It is not just knowledge of the field that matters here, it is many things including: personal experiences, expectations of the audience to make jumps, and ability to go through information quickly.

The ILO Critical Thinking Rubric

CSUEB ILO Critical Thinking Rubric Approved by Academic Senate, March 2016 Description: Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.				
	4	3	2	1
Explanation of issues	Explanation stated clearly and provides all relevant information necessary for full understanding.	Explanation stated less clearly and/or provides mostly relevant information necessary for full understanding.	Explanation stated provides some relevant information necessary for understanding.	Explanation too weak for necessary understanding or not provided.
Use of evidence	Provides sufficient information to support claims and conclusions made.	Provides some information to support claims and conclusions made.	Provides little information to support claims and conclusions made.	Lacks information to support claims and conclusions made.
Context, assumptions	Thoroughly analyzes strengths and weaknesses of one's own and others' assumptions; carefully evaluates influence of context.	Analyzes strengths and weaknesses of one's own and others' assumptions; evaluates context.	Minimally analyzes strengths and weaknesses of one's own and others' assumptions; minimally evaluates context.	Fails to analyze strengths and weaknesses of one's own and others' assumptions; does not evaluate context.
Alternative viewpoints	Carefully evaluates all relevant alternative viewpoints.	Evaluates most of the relevant alternative viewpoints.	Evaluates some of the relevant alternative viewpoints.	Evaluates little/none of the relevant alternative viewpoints.
Statement of position	States a clear position that is valid, original, and/or innovative, as appropriate.	States a relatively clear position that has some validity, originality and/or innovation, as appropriate.	States a position that lacks validity, originality, and/or innovation.	Does not state a position.
Conclusions, implications, and consequences	Conclusions, implications, and consequences flow from student's analysis.	Conclusions, implications, and consequences generally flow from student's analysis.	Conclusions, implications, and consequences minimally flow from student's analysis.	Conclusions, implications, and consequences do not flow from student's analysis.

Activities and Assignment Examples for the ILO Critical Thinking rubric

*What follows is a breakdown of the rubric categories. It includes the **activities** mentioned in the category and some reflections on them, the standard and goals associated with that task, and some brief **examples** from a variety of fields on how those elements might be addressed in an assignment.*

Explanation of Issues **The Task**: Provide information necessary for understanding (of issue) ● Setting up the issue is prior to other work or standard. This is where the student establishes the scope of their submission as well as setting up the framework that they will build on. Being explicit about the students need to both narrow and build in this case could be valuable. The issue is both the product and source of the students' organization. ● Standard and Goal: Clear, relevant, full understanding. ● Clarity is often a product of organization. ● Help students to realize that relevance is a key value and might need to be investigated or justified. ● Students often think that understanding is a product of repeating the work of others. Understanding is more often the product of caring about an issue, taking ownership, or having it impact you.	**Some assignment instruction/prompt examples of "Explanation of Issues"** ● Support a claim about something that matters to you. Make sure to identify why the claim would be disputed and use your organization to define the scope of your support as well as build a framework of evidence for it. ● Define risk factors using credible sources (e.g., Centers for Disease and Control, American Heart Association). Identify a person in your life with the above risk factor and be able to explain to them how they may lower their blood pressure. ● Choose an issue that affects you; using credible sources (peer-reviewed, not crowd-sourced data) succinctly discuss the issue and why it is important to you in order to make it relatable to others. ● Provide a clear statement of problem, describe why it is a problem, using data driven evidence to demonstrate the severity of the problem.

Use of Evidence The Task: Provide information to support claims and conclusions. ● Support is a key element of critical thinking. Spend some time explaining the nature of support both in and out of your discipline. Present a variety of ways to support a claim. Note how important various methods of support are to the submission. Does the submission rely on some support more than others? How does that impact the student's organization? ● References are one method of support. Do your students understand how references support claims? Do they understand that for academics that a reference is not conclusive proof? Do the students understand how to use the references? ● Ask the students to organize their submission with support in mind. ● Standard and Goal: Sufficient ● Are you explicit about the nature, quality, and amount of support required? If the assignment is less structured do you give the students some values to consider when evaluating support? For example you could tell the student that they need to find support that a particular audience would accept.	**Some assignment instruction/prompt examples of "Use of Evidence"** ● When you support the claim consider what the best evidence would be. Make sure that the support you offer would not be easily dismissed by someone who disagreed with you. Try to find support that someone who disagreed with you would agree to until the implications of it were made clear. ● Select and research five individual pricing strategies as identified in the article. Then offer two additional examples of current pricing strategies not addressed in the article. ● Provide at least two peer-reviewed sources for every two pages of analysis. ● Use at least 3 credible sources that support your position on your issue and 2 credible sources that are in opposition to your position. ● Keep a Research log twice during the course of writing the paper – group articles by research topics; include search terms, citations (APA format), and relevance of the article. ● What did the author claim is true? Does the evidence really support the claim(s)? ● Find ten research articles/journals and identify their connections to your research questions.

Context, Assumptions	**Some assignment instruction/prompt examples of "Context, Assumptions"**
The Task: Analyze strengths and weaknesses of one's own and others' assumptions. Also: Evaluate the influence of context. ● Assumptions are often treated as only weaknesses. This downplays how universal they are. What tools do the students have to identify and analyze their assumptions? Do you help the student to identify which assumptions are worthy of their attention? Do you talk about bias? Is the student asked to? ● Is the student given tools to identify content and its influence? Are they instructed to relate context to the other categories (for example the issue and the support)? ● It often takes students some time to identify assumptions and context. ● Standard and Goal: Thoroughly, carefully. ● Thorough is a matter of the correct attention to depth and breadth. It is not always a matter of doing more, but putting the attention where it belongs. ● Care is often a matter of knowing your limits. Are the students' made aware of the risks of not being careful?	● What assumptions does your presentation of the issue rely on? How about your support? How does the context shape and influence the issue and the support? What risks are involved? How do you compensate for them? ● Research paper: Students are required to write a research paper. Week 1-3: complete "Introduction;" Week 4-6: a Literature review; Week 7-10: Develop a survey instrument & cover letter, data collection, and data coding; Week 11-14: analyze data and complete results section; Week 15: visualization of results; Week 16: final research paper. ● When writing this paper make sure to keep it impersonal. Use the formalized tools of cost benefits analysis and stakeholder identification come up with a solution independent of individual biases. ● Watch out for the gap between research and industry. Target your submission to someone with experience in the field who might not be aware of recent research. ● Always make sure that you convey why the information you are presenting matters. Why should anyone care about what you're writing about? ● Identify risk and steps being taken to protect from them.

Alternative Viewpoints The Task: Evaluate Alternative Viewpoints ● Often students are comparing multiple alternatives. Are they encouraged to identify the alternatives to their position? Are they encouraged to use the alternatives to influence their organization? ● Standard and Goal: Carefully, relevant. ● Care should be taken in the treatment of the other viewpoints. Since the alternatives are being dealt with quickly the students need to deal with them in a manner that does them justice in a timely way. ● Identifying relevant alternatives is an important tool for students. It might help your student to relate the relevance of an alternative to the amount of time and energy that should be put into it.	**Some assignment instruction/prompt examples of "Alternative Viewpoints"** ● Be explicit about what you are arguing against. Do not just deal with the alternatives that make you position seem stronger. Identify the space that you should dedicate to the alternatives and work appropriately. Do not ignore obvious alternatives. ● Compare four articles, so you should compare & contrast ideas from those articles and may include ideas from additional papers. ● State how 3 different theories explain the development of a clinical disorder. State at least one strength and one weakness of each view. Use at least 3 peer-reviewed articles to back up discussion of these alternatives. ● In sustainability there are 3 considerations (population, affluence, technology) so students should address each viewpoint, and may describe how these may be balanced.

Statement of Position The Task: States a position ● This should probably come near the beginning of the submission since you cannot evaluate support until you know the students' position. Students sometimes need to be told this as they might think that including a twist makes their submission more interesting. Students might be directed to reiterate their thesis for longer submissions. ● Standard and Goal: Clear, valid, original, innovative ● Clear in this case is probably relative to a particular audience. ● 'Valid' is a technical term in critical thinking, but is being used in a non-technical manner in this rubric. ● The value of both originality and innovation varies from assignment to assignment and field to field. Students often limit these to big moves, however there is usually room for originality and innovation in the small moves. Students can innovate by finding a new source of support, but they can be just as innovative by using an existing source in a new manner. Judging innovation and originality is rarely a manner of it never having been done before, instead it is usually a matter of the student showing appropriate thought for their level.	**Some assignment instruction/prompt examples of "Statement of Position"** ● Remember that a thesis is like a one sentence summary of your paper. Include enough information in your thesis so that it helps to define the organization of the rest of the paper. A boring thesis will result in a boring paper. Extra effort into a good thesis makes the rest of the paper easier. ● Highlight your thesis. ● Make sure to include your thesis statement in one of the first two paragraphs.

Conclusion, Implications, and Consequences The Task: Conclusions, implications, and consequences flow from student's analysis. ● Standard and Goal: Flow ● This category does not fit the breakdown that we have done for the other categories. The flow mentioned is not the flow of prose, it is the flow of ideas. The relationship between the parts of the submission should be clear and make sense. This is about the large scale organization. Do you encourage your students to be explicit about their large scale organization?	**Some assignment instruction/prompt examples of "Conclusion, Implications, and Consequences"** ● Write a one sentence summary of each paragraph. Use these sentences to evaluate and improve the organization of the paragraph as well as how the paragraphs fit together. ● Make sure that the transitions make sense. The connectivity must be there. ● Your conclusion should be supported by evidence. ● If doing as a team assignment, make sure that the work as a whole flows in a single voice.

Essentials Relevant to All Assignments

Students complete assignments to:

- practice applying skills, content, and concepts learned, demonstrate their achievement, and
- to be assessed and receive feedback on the achievement of assignment, course, and program learning outcomes.

- ❑ How will my assignment prompt students to show what content they have learned and/or demonstrate their skills?
- ❑ Does the array of assignments in this class address students with varied learning preferences multiple means of demonstrating knowledge and skill acquisition?

Students need *clear and transparent expectations* and instructions documented *in writing*:

- Assignment instructions should clearly identify tasks, provide the required format elements, and describe the final product.
- Assignment descriptions should help students clearly understand the main purpose.
- Assignment descriptions should also demonstrate the connections to how their work meets learning outcomes, builds on their knowledge and skills for future assignments, relates to graduation, and has professional relevance.
- A grading rubric that expresses expectations and aligns with the outcomes will assist students as they complete the assignment.

- ❑ How will assignment instructions clarify what tasks to do, how they are connected, how to get started, and how to complete the tasks?
- ❑ How will you know if students met the assignment expectations; how will students be assessed?

Chunk and scaffold assignments: Students perform better on assignments when instructors break them into manageable chunks. Presenting students with smaller assignments that build into a larger one creates the opportunity for early feedback and improvement.

Example of smaller assignments that build toward a research essay that meets expectations:

Course timing	Week 6	Week 8	Week 10	Week 12	Week 14
Developmental Assignment Due	Thesis statement	Annotated Bibliography	Outline	Essay Draft	Final essay

Reflection Aids Retention: Students' learning improves and sticks when they *reflect* on their process and their completed assignment:

- Ask students to report what they learned from the assignment or what they would do differently in a future assignment.
- Student reflection on assignment process and performance may also help you shape the next version of the assignment.

Example Critical Thinking paper assignment

Explanation of issues

Write a **1000-1500 word (3-5 page double spaced**) argumentative paper on a topic related to class content. **Support a claim about something that matters to you. Make sure to identify why the claim would be disputed and use your organization to define the scope of your support as well as build a framework of evidence for it.**

I will provide some topics throughout the course, but the best topic is one that you are interested in. If you have an idea, I will help you develop it. If you are at all unsure that your topic is acceptable, please run it by me.

Statement of position

Your topic will turn into a thesis. A thesis is the reason for writing the paper, it is an organizational principle of your paper. I am happy to help you develop your thesis. A good thesis is necessary for a good paper. **Remember that a thesis is like a one sentence summary of your paper. Include enough information in your thesis so that it helps to define the organization of the rest of the paper. A boring thesis will result in a boring paper. Extra effort into a good thesis makes the rest of the paper easier.**

Conclusions, Implications, and consequences

Spend some time thinking about organization. Students often think about their thesis and their sentences but not their paragraphs. **Write a one sentence summary of each paragraph. Use these sentences to evaluate and improve the organization of the paragraph as well as how the paragraphs fit together.** Include these sentences at the beginning of the paper. Each sentence should summarize the corresponding paragraph (it is ok if these sentences appear in the paragraph in question) with **lots of content** (no, "I talk about stuff" nonsense). Use your thesis to summarize your introduction (assuming you have an introduction).

Use Of Evidence

Formatting, spelling, and grammar are tools for you to use to help communicate your point. I have no rules for formatting and will not evaluate you based on your ability to follow formatting rules. Instead, you will be evaluated on how you use formatting to convey your content.

When you support the claim consider what the best evidence would be. Make sure that the support you offer would not be easily dismissed by someone who disagreed with you. Try to find support that someone who disagreed with you would agree to until the implications of it were made clear.

Context, assumptions

What assumptions does your presentation of the issue rely on? How about your support? How does the context shape and influence the issue and the support? What risks are involved? Make sure that you compensate for these.

Be explicit about what you are arguing against. Do not just deal with the alternatives that make you position seem stronger. Identify the space that you should dedicate to the alternatives and work appropriately. Do not ignore obvious alternatives.

Alternative viewpoints

References are a way of supporting your claims. I do not require a specific number. I do not restrict the sources that you can use, but treat them for what they are. If you make a claim that

is better with a reference, show me. It is more important to me that you demonstrate understanding of how references work.

You will have a chance to present your paper to the class before it is due. The purpose of this presentation is not evaluation but discussing strategies of improvement. Your paper can be in any form when you present it (from 'I haven't picked a topic' to 'I have a polished draft'). I will also offer comments as you work on the paper. Remember that the point of the comments is to help you to improve the paper and your paper writing skills.

Evaluation will be based on:

- Organization based on your thesis
- Focusing on the interesting path, not the easy one
- Clarity
- Quality of argument (plausibility, identifying implications and assumptions, showing knowledge of limits, and identifying foundational support)
- Depth, not breadth
- Originality and demonstration of thought

Some generalized grading benchmarks (neither conclusive nor exhaustive):

If you don't have a thesis (a point to the paper that you support and use to filter out information), your paper will be a 'C' at best.

If you have a thesis but say things that do not show more than cursory thought, your paper will be a 'B' at best.

If you show rigor, understanding, thought, and awareness that facts are both insufficient and need to be filtered, then we can start talking about an 'A'.