

Our goal is to develop the traits of independent researchers. To that end, you will complete an independent project over the remainder of the semester. We will scaffold that project around a few basic skills and tasks to practice those skills (see syllabus for relevant dates).

1. A manageable and interesting research proposal.
2. Annotated bibliography.
3. Literature review.
4. Oral presentation.
5. Final draft.

Research Proposal–SUBMIT

In this first part of the project, you will develop a research proposal. To do that, complete the following three tasks (see below for further information):

1. State a manageable research question about time. You must use an interrogative. There should be a question mark.
2. Write a 150–250 words to provide background to your question.
3. Write the references for 3 peer reviewed sources that deals with your topic.

NB: If I do not approve your proposal, you will need to revise it before moving on to further parts of the capstone.

Task 1

You must clearly articulate some **manageable question** about **time** you wish to answer this semester. There are three things I want to emphasize. First, I mean **question**. Questions have question marks and are formed with an interrogatives like the following:

- *which, what, how, why, who, whom, whose, when, where, does*

So *what* question about time would you like to answer this semester?

Second, you must pick a **manageable** question. Research projects vary in scope and ambition. Some ask narrowly defined questions that can be answered in a few months. Others ask large questions that take years to address. Compare the following:

1. How do humans measure time?
2. Why is cesium a good element to use in an atomic clock?

Our first question would require you to examine every clock humans have created for measuring time. It would require you to give, in effect, a full history of time measurement. That's a huge project, and it would take an entire book to complete it successfully. The second question is manageable and could be completed in a couple of months. It requires you to discuss what it means for a clock to be accurate, explain how atomic clocks work, and discuss the features of cesium that makes it a good choice for such a clock. It doesn't require a full discussion of cesium, but it requires that you say enough to answer the question. The second would be a manageable capstone project. The first would not.

Finally, it is essential that your question is about **time**. Some reference to time in the question does not suffice. Compare the following:

1. Can everyone run a four minute mile?
2. How did changes in time-keeping affect the sport of track and field?

The first question mentions time, but it's hardly a project about time. The second question is better. It is a question that requires some investigation into different clocks, into how humans used them in a sporting competition, and into how and why the development of clocks shaped that sport. If uncertain if your question is about time, ask yourself whether your project will require you to research and write about either the nature and existence of time, or the nature of time-measurement. Of course, your project will likely involve something in addition to these things. But if you could complete your project without writing in anyway about these things, then the project is clearly not about time.

Task 2

The second task asks you to provide some context and background to your question, to provide sufficient details to your reader to help them see why your question is an interesting one. Or to put it differently, it provides enough detail to explain why your question does not have an obvious answer and is something that requires further research and study. Suppose you encounter this question:

- Does Socrates claim that a person can be wise if they know nothing whatsoever?

Suppose you have never heard of Socrates. You wouldn't then have sufficient background information to understand the general area the question concerned. You definitely wouldn't know enough to care about answering that question. Now suppose that the author prefaced their question with the following:

Socrates, an ancient Greek philosopher, is famous for claiming that he is wise because he does not take himself to know what he does

not know. But he doesn't explain what wisdom amounts to. The very little he says seems to leave open the possibility that a person who knew nothing at all could be wise. As long as they didn't claim to have knowledge, they would be wise. But lots of things satisfy this description. My cat does. She doesn't claim to have knowledge. Does that make her wise? It does from a simple reading of Socrates' claim. So, we want to take a closer look at Socrates' account of wisdom. Perhaps he believes that the wise person is not merely silent about their lack of knowledge but is also aware of that lack. That kind of awareness is not something my cat possesses. But if this isn't the relevant addition, is there anything else to Socrates' account of wisdom that would avoid the conclusion that my cat is wise?

Task 3

The third task asks you to identify three peer reviewed sources for your paper. Remember, a peer reviewed source is an academic source. You can't use newspapers, or blogs, etc. This task takes time and effort to complete. You may need help from a librarian. In future assignments, you will read these sources and write about them. If you don't use peer reviewed sources, you will unlikely pass the capstone and this course.