The major assessment task associated with this course involves a thorough and complete analysis of ONE major application of quantum computing. The assessment task is made up of two components:

- the construction and presentation of a professional academic-style conference poster.
- the delivery of an oral presentation to a wider audience, followed by a question and answer session.

Make up your own mind as to the choice of subject, and follow the framework below:

**Where do I start?**

The first thing you have to do, is decide, which application of quantum computing interests me? To help you with this, you might want to refresh yourself with some of the big ideas and potential applications of quantum computing.

*Google/NASA QuAIL Video*  *NERSC Website*  *CRD Website*  *NERSC Platforms*

*Google/NASA QuAIL Website*  *D:Wave Systems*  *Google/NASA QuAIL Team*

**Nuts and Bolts**

1. First of all, after researching different 21st century applications of quantum computing, you need to select an application that interests you.

2. Secondly, you will need to make yourself familiar with the key assessment criteria this will be provided to you.

3. You now need to start thinking about your topic. Do some further research. Pick a key area of your application. This will form the basis of your presentation. For example, if you select quantum computing in the medical sciences, you might select genomic research as your key focus area.

4. Now you need to start thinking about your final presentation. The main objective of your presentation is to educate your target audience about the ways in which how quantum computing will benefit and advance your application.
The final presentation will comprise two parts:

a. A five to ten minute oral presentation, followed by a question and answer session

b. A professionally produced poster presentation.

**The Oral Presentation**

The final oral presentation will be a five to ten minute summative assessment of an emerging 21st century application of quantum computing. This will be followed by an open question and answer session from the audience.

The number of slides you choose is strictly up to you, but it must include the following components:

1. A title
2. The application. You will need to briefly and broadly discuss the application of quantum computing that you have chosen.
3. The problem. In this section you need to choose and discuss one key aspect of your application that will be solved using quantum computing.
4. The solution. Here, you will need to discuss the science behind, how quantum computing will actually solve the Problem you have posed. This section will form the key part of your presentation and must be very detailed.
5. Conclusions. Here you will summarise the key findings and information of your research into the use of quantum computing in your chosen application.
6. Bibliography. You must include a brief bibliography detailing the sources of your information.
7. Acknowledgements (optional). It includes any person(s) you wish to acknowledge for their assistance.

**The Academic Poster Presentation**

The final academic poster presentation will be a summative assessment of the same emerging 21st century application of quantum computing presented in the oral presentation, but more detailed. These professionally produced posters will be presented for academic scrutiny to a wider audience. You will be expected to be available during the poster session for peer review and feedback.

For best results, the academic poster should be constructed using Microsoft Publisher as this will allow for large scale documents to be published. The poster must be a minimum of A1 size and will need to be professionally printed and laminated. We recommend Officeworks or Snap Printing.
How to create an effective conference poster

A scientific poster communicates your research at a conference. It is a visual presentation of information. It should not simply reproduce your oral presentation. Finally, the poster should be understandable to the viewer without the need for explanation.

Before you start constructing your poster, you will need to read the following information carefully:

*How to create a research poster*, Bern Dibner Library of Science and Technology, New York University

*Effective poster design for academic conferences*, Mary Lee Eggart, Louisiana State University

You should base your academic conference poster on the information and advice given in the above links. Your poster must address the key points outlined in the final presentation assessment rubric.

Good luck, have fun and enjoy the challenge. Remember, when in doubt, just ask!