

Background:

Select any topic relevant to one of the fourteen Grand Challenges for Engineering in the 21st Century as identified by the National Academy of Engineering. We will pair you with a partner based on your interests. You will give a 10-15 minute presentation on the second Saturday of the term (July 20th). The presentations should be active and engaging. You can include a demonstration, hands-on activity, kahoot, whatever you want! Your classmates and instructors just want to learn about new and exciting research areas from you!

<http://www.engineeringchallenges.org/>

Topics:

The topic can be about absolutely anything related to the many grand challenges for engineering in the 21st century.

- Choose an inspiring person working in the field!
- Choose an exciting new discovery or development!
- Choose what you think the future might look like!
- Choose an issue that you think is important to address!

Sample Presentation Topic Ideas

- Using nuclear fusion for deep space travel.
- The feasibility of Dyson spheres.
- White hat hackers.
- Bionic limbs.
- Electronic cochlear/retinal implants.
- Deep brain stimulation.
- Artificial intelligence.
- Water desalination.
- Pumping carbon deep beneath the ocean.
- Automated electric transit.
- Virtual reality for treating mental disorders.

Content

This is not an exhaustive list of content that should be in your presentation, but a good starting point.

- Why is this a problem?
- Why is it a grand challenge for engineers?
- What is the development or person that you think will make important strides towards overcoming the challenge?
 - How will it overcome the challenge?
 - Are there pros and cons to this development?
 - What are the challenges to this development?
- How will this benefit humanity? (Think globally)
- How will it shape the future?

Guidelines

- Topic should be focused.
- Problem that is being addressed should be clearly explained.
- Needs to have good supporting documentation.
- Presentation should be well-organized.
- Your presentation should be clear and engaging.
- Your slides, demonstration, or other media should help support your presentation, not detract from it.

Category	Scoring Criteria	Total Points	Score
Organization (15 points)	The type of presentation is appropriate for the topic and audience.	5	
	Information is presented in a logical sequence.	5	
	Presentation appropriately cites requisite number of references.	5	
Content (55 points)	Introduction is attention-getting, lays out the problem well, and establishes a framework for the rest of the presentation.	5	
	Technical terms are well-defined in language appropriate for the target audience.	5	
	Presentation contains accurate information.	10	
	Material included is relevant to the overall message/purpose.	10	
	Appropriate amount of material is prepared, and points made reflect well their relative importance.	10	
	Topic chosen is cutting edge and supported and described in an engaging manner.	10	
	There is an obvious conclusion summarizing the presentation.	5	
Presentation (30 points)	Speaker uses a clear voice, maintains good eye contact with the audience, delivers content effectively, and is appropriately animated.	10	
	Visual aids are well prepared, informative, effective, and not distracting.	5	
	Length of presentation is within the assigned time limits.	5	
	Information was well communicated.	10	
Score	Total Points	100	