

3.044 Video project

In lecture, Chris often shows a video of a manufacturing process and walks us through the physics. For this assignment, it will be your turn to explain a process!

1. Select a video clip that shows a materials process of your choice. It may not be a video used in this class.
2. Submit a brief proposal online. The proposal should be a paragraph or two and state what process you will study, identify the problem you will analyze, provide a simple explanation of your approach, and specify the application of the solution to designing the factory, equipment, or process.
3. Annotate the video with voice, text bubbles, video snippets that you make, etc. with the software of your choice. Be creative! The point is to walk the viewer through the physics, break down the problem, and apply the results. Your annotations should indicate the problem to solve, geometry, relevant boundary conditions (if applicable), appropriate and quantitatively justified simplifications the problem, and governing equations. If the solution can be obtained by hand or found in a solution manual, also include the solution. Also indicate the consequences of your solution to the design of the factory/equipment, and limitations it imposes (if any). The total length of your video should be at minimum 2 minutes and may not exceed 5 minutes.
4. Submit your video online by uploading the video directly, or by submitting a link to a video site (e.g. youtube) or file sharing service (e.g. dropbox).

Grading criteria

The videos will be judged on the following:

Completion of *proposal* (10 points)

Accuracy of physics (10 points)

Clarity of your description (10 points)

Sophistication of the problem and your solution (10 points)

Aesthetics: looks good, sounds good, video quality is sufficient, delivery is interesting and creative (10 points)

Total points available: 50

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