

Video lectures are useful for eLearning and flipped classroom approaches, where students are asked to review new materials before class. However, video lectures can be expensive and time-consuming to produce, especially when the right equipment and skill-set are not readily available. Once a video is made, its content is hard to change or customize to specific needs. The video file size can be large, making it impractical to watch when the bandwidth, device storage or screen resolution is limited.

In this project, we aim to replace video lectures with HTML slides for the foundation course on Linear Algebra and Vector Calculus for Engineers. The slides can be recorded and played in a web browser, the audio is synthesized with searchable subtitles optionally displayed. In addition, the content of the slides can be navigated and edited easily. The use of HTML also opens many new possibilities because web services and interactive components can be readily included in the slides.

Video:

<https://youtu.be/ms4CRxrf2vk>