

USING A DRAWING TABLET TO CRAFT EDUCATIONAL VIDEOS FOR VISUAL LEARNERS

COURSE SYLLABUS

Course Dates and Times. 1PM to 3PM, June 27 (Monday) to June 30 (Thursday)

Course Description. This 4-day online course requires approximately 12 hours of time commitment. Participants, from all academic disciplines, who are used to teaching via animated slide show (e.g., PowerPoint), will be able to move their teaching to the next level by learning a new approach, fit for many of our students who are visual learners. From the student perspective, this approach focuses on the illustration, via visual annotations, of complex examples. You will learn and practice, through mini-“lectures” and practicals, how to: **1)** design and create starter pages (which are reusable and extensible) for illustrations; **2)** annotate starter pages with colourful remarks; and **3)** record and publish the illustration process for the self-paced study of students. This approach has been developed and tested by the instructor, an EECS faculty member who has taught 2,000+ students.

Learning Outcomes. Upon completing this course, you will be able to:

1. Identify the limitations of using animated slide show to respond to class *dynamics*.
2. Design starter pages for detailed illustrations based on lecture materials.
3. Create reusable and extensible starter pages in a note-taking app.
4. Perform annotations on starter pages in a note-taking app.
5. Choreograph slide show and visual illustration.
6. Record, edit, and publish educational videos.

Target Participants. Is this the right course for me? Though designed and instructed by an EECS faculty member, all academic disciplines (e.g., STEM, psychology, economics, humanities) are welcome as the teaching skills you will acquire are completely general. More precisely, instructors who have the need to perform visual illustrations on complex examples, both in detail and according to the class dynamics, will benefit from participating in this course: attending a series of mini-“lectures” and completing the assigned practicals.

Instructor. Prof. Chen-Wei (Jackie) Wang (click [here](#) to see his home page)

Resources. For inspiration, you can find all educational videos created by the instructor:

- (Live & Pre-recorded) Lectures: <https://www.eecs.yorku.ca/~jackie/teaching/lectures>
- Tutorials: <https://www.eecs.yorku.ca/~jackie/teaching/tutorials>
- Example starter/annotated pages: <https://www.eecs.yorku.ca/~jackie/teaching/iPad>

Expected Workload. How much time should I spend on this course? This course is designed to contain two components:

- **Synchronous Component: 8 hours.** The course lasts for four days, where each day you are required to attend a 2-hour live session, over Zoom, held by the instructor. Each day's session is decomposed into (up to) three parts: **1**) participants presenting their completed practical and receiving feedback; **2**) a mini-“lecture” covering the next technical foundation; and **3**) a brief introduction to the next day's practical.
- **Asynchronous Component: 4 hours.** Between the 4 synchronous sessions, the participants will be assigned 3 practicals to complete individually (no team work). These inter-related practicals are designed to have you experience the entire workflow of crafting educational videos for visual learners. Whereas perfection on quality is not expected, participants who are keen may choose to go beyond the estimated number of hours to polish their materials.

Technical Requirements. As the course title suggests, the use of a drawing tablet is fundamental. Also, mini-“lectures” and practicals are to be completed within the Apple ecosystem, which is what the instructor adopts in their teaching. Here is a list of requirements, satisfying all of which shall allow you to benefit the most from the curriculum:

1. **Hardware Requirements:**

1.1 A macbook (pro or air)

What if I own a Windows PC or Tablet?

- You are still welcome to attend the course!
- If you own a Windows PC, you may not be able to mirror the iPad screen to your PC desktop through a stable, wired connection (whereas in the case of a Macbook, there is a native, free solution to it). Instead, google “mirror ipad to pc” to see available programs for wirelessly mirroring your iPad screen to your PC desktop.
- If you own a Windows tablet computer (e.g., Surface Pro), whereas performing visual annotations is not an issue, you need some adaptations (e.g., note-taking app, switching between desktops/tools, template pages) to complete the practicals.

1.2 An iPad equipped with an Apple pencil

Note. Each of iPad Pro, iPad Air, and iPad Mini is supported by the use of (the compatible generation of) an Apple pencil.

2. **Software Requirements:**

2.1 Installing the (free) “Active Presenter” screen recorder on your Macbook or PC

2.2 Installing the “GoodNotes 5” note-taking app on your iPad (which costs \approx \$10)

Note. There are other screen recorders or note-taking apps which may also work for implementing the approach. However, the above software programs are what the instructor is most familiar with, so participants are advised not to consider other alternatives during the course.

2.3 A YouTube account (<https://www.youtube.com/>)

3. **(Optional)** A studio microphone

Note. Use of the default microphone of your macbook is absolutely acceptable for the course, but if you wish to create videos with the best sound quality possible, a USB studio microphone would be worth considering (e.g., the instructor has been using the Blue Yeti USB Microphone).

Detailed Course Structure.**Day 1****SYNCHRONOUS**

- Introduction & Resources
- How to use the Goodnotes 5 note-taking app (Part 1: Basics)
- Introducing Practical 1

ASYNCHRONOUS

- Complete Practical 1:
 - * Choose a challenging topic you'd like to teach.
 - * Create (animated) slides for a lesson of 10 minutes.
 - * Get ready to deliver the lesson on the next day's synchronous session.

Day 2**SYNCHRONOUS**

- Presentation & Discussion on Practical 1
- How to use the Goodnotes 5 note-taking app (Part 2: Starter Pages)
- Introducing Practical 2

ASYNCHRONOUS

- Complete Practical 2:
 - * To complement your slides, determine what example(s) you'd like to illustrate.
 - * Design and create starter pages to set up your chosen example(s).
 - * Create an "annotated" version of the starter pages, showing the intended level of details of your illustration.

Day 3**SYNCHRONOUS**

- Presentation & Discussion on Practical 2
- How to choreograph activities (e.g., slide show, illustrations, tool demo)
- How to record and edit videos in **ActivePresenter**
- How to upload and publish videos to YouTube
- Introducing Practical 3

ASYNCHRONOUS

- Complete Practical 3:
 - * Record a lesson of 10 to 12 minutes with slide show and visual illustration.
 - * Upload and publish the video to YouTube (and share the link).

Day 4**SYNCHRONOUS**

- Presentation & Discussion on Practical 3
- Wrap-Up and Q&A