Drupal – Course Structures

Introduction

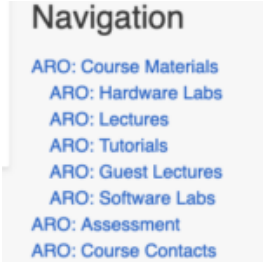
When creating a course in OpenCourseWare (powered by Drupal) for the first time, the ILTS team can provide a starting course template in Drupal either based 1) on the course structure and content from Learn; OR 2) as a blank template with an agreed structure.

In this post, we would like to focus on the options available for a blank template structure within Drupal. We will use courses, already available within OpenCourseWare, as examples of the types of course structure you can choose from. The following is not an exhaustive list of all courses within OpenCourseWare, but a small sampling of courses within our chosen structures. The home page of Open Course has a list of all courses for you to browse, if preferred.

Course Structures

A) Structured by activity (e.g. lectures, tutorials, readings, etc.):

- ARO and EPL



ARO Navigation Menu, in Drupal (public view)

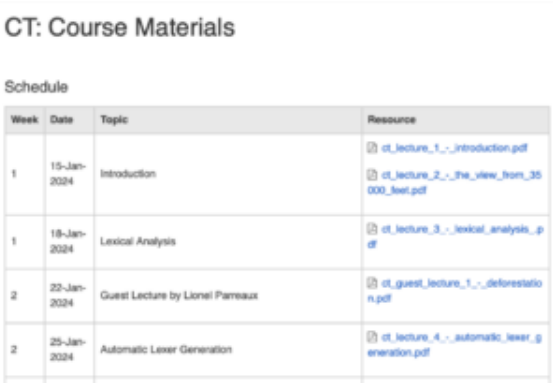
B) Structured by week (e.g. week 1, week 2, week 3, etc):

- CDI1; IRR; and SDM

CDI1 Navigation Menu, in Drupal (public view)

C) Structured by schedule (e.g. a schedule table with links to slides, video, handouts, etc):

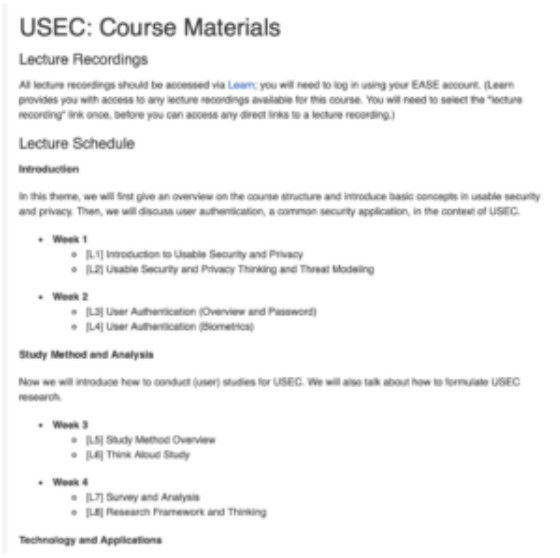
- CT; EXC; and IQC



CT Schedule in Drupal

D) Courses with a mixed structure (e.g. by schedule, activities and weeks):

- ANLP; CGGS; IQPS (aka QPS-11); and USEC



USEC: Course Materials

Lecture Recordings

All lecture recordings should be accessed via Learn; you will need to log in using your EASE account. (Learn provides you with access to any lecture recordings available for this course. You will need to select the "lecture recording" link once, before you can access any direct links to a lecture recording.)

Lecture Schedule

Introduction

In this theme, we will first give an overview on the course structure and introduce basic concepts in usable security and privacy. Then, we will discuss user authentication, a common security application, in the context of USEC.

- **Week 1**
  - [L1] Introduction to Usable Security and Privacy
  - [L2] Usable Security and Privacy Thinking and Threat Modeling
- **Week 2**
  - [L3] User Authentication (Overview and Password)
  - [L4] User Authentication (Biometrics)

Study Method and Analysis

Now we will introduce how to conduct (user) studies for USEC. We will also talk about how to formulate USEC research.

- **Week 3**
  - [L5] Study Method Overview
  - [L6] Think Aloud Study
- **Week 4**
  - [L7] Survey and Analysis
  - [L8] Research Framework and Thinking

Technology and Applications

USEC Course Structure – Weekly View

USEC: Lecture 1: Introduction to Usable Security and Privacy

Lecture Slides

See attached file

Materials

- **Chapter 1** - Garfinkel, Simson, and Heather Richter Lipford. *Usable Security: History, Themes, and Challenges*. Cham: Morgan & Claypool Publishers, 2014. Print.

Further Videos:

- Stanford Seminar - Conducting Usable Privacy and Security Studies: It's Complicated by Lorrie Faith Cranor
- HCI: Who are the users
- Security: CIA Definitions

Further Reading:

- Hoyle, Roberto, et al. "Was my message read? privacy and signaling on Facebook messenger." *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. 2017.

Take-home

- Microsoft 365 Safe Links
- **(Blog)** BBC News - WhatsApp and other messaging apps oppose 'surveillance'

Files

lecture-1introduction-usable-security-and-privacy.pdf

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‹ USEC: HCI Videos Up USEC: Lecture 2: Usable Security and Privacy Thinking & Threat Modeling ›

USEC Course Structure – Lecture View

Further Information

When creating the course in Drupal, ILTS will provide support and guidance for you to choose a suitable structure for your

course. This agreed structure will then make it easier for you to build your content and populate your course in time for Welcome Week.

If you'd like to discuss the options and contact ILTS then please visit the support page. We look forward to working with you.

Informatics Teaching Festival 2022: Design of Teaching and Learning

The Informatics Teaching Festival is back for a third consecutive year and will run Monday May 9th to Wednesday May 11th 2022.

The 2022 Informatics Teaching Festival will focus on the design of teaching and learning and consist of the following sub-themes:

- overview of course design (Day 1, May 9th 2022)
- design to develop student skills, including for the industry (Day 2, May 10th 2022)
- design of assessment (Day 3, May 11th 2022).

Each day will include both presentations on school and university processes, tools and support, as well as the sharing of experience and good practice around different approaches to the design of teaching and learning, and internal (Informatics or university-based) as well as invited external speakers.

If you'd like to attend any of the following sessions, and are

not a member of the School of Informatics, please register your interest here, and a Collaborate link will be emailed to you in advance of the session(s).

Schedule* –

Day 1: Overview of Course Design. Monday, May 9th 2022

Topic (and links to recordings after event)	Date/Time	Speaker, with linked Resources
Opening / Welcome Session	9-9.10am	Björn Franke
Morning Session – Designing a new course:	Morning Session: 9.10-12.30pm	
Process and experience of designing new courses: Designing a new Informatics Course – Sharon Goldwater; Design Decisions and Dilemnas in a new data science course – David Sterratt; Designing INF2-IADS – John Longley	9.10-10.40am	Sharon Goldwater David Sterratt John Longley
Coffee break	10.40-11am	Meet in Gathertown
Support for course design (ELDeRs)	11-11.30am	Fiona Hale Cristina Alexandru

Sharing positive experiences on improved courses	11.30am-12.15pm	Heather Yorston on DMP Pavlos Andreadis
Discussion	12.15-12.30pm	
Lunch break	12.30pm-2pm	
Afternoon Session – Improving an existing course:	Afternoon Session: 2-5pm	
Course proposal / improvement (involving Board of Studies approval)	2-3.20pm	Aurora Constantin Felipe Costa Sperb Heather Yorston RS for CAM
Coffee break	3.20-3.40pm	Meet in Gathertown
Course improvement (not involving Board of Studies approval)	3.40-4.30pm	Cristina Alexandru on SEPP Pavlos Andreadis
Discussion	4.30-5pm	
Day end	5pm	

Day 2: Design to develop student skills. Tuesday, May 10th 2022

Topic (and links to recordings after event)	Date/Time	Speaker / Resources

Morning Session – Developing core Informatics skills:	Morning Session: 9-12.30pm	
Cristina Alexandru, Heather Yorston, and Brian Mitchell: Teaching students with varied profiles in UG1 Judy Robertston: Teaching First year students with varied backgrounds	9-10am	Cristina Alexandru on Varied Profiles UG1 Heather Yorston on FAC and MC Brian Mitchell – Prize and Prejudice Judy Robertson – prerecorded video
Teaching programming	10-11am	Pawel Orzechowski Charlotte Desvages – Day 2 Judy Robertson – prerecorded video Michael Glienecke
Discussion	11-11.15am	
Coffee break	11.15-11.30am	Meet in Gathertown
Teaching Modelling: Reflection on including the industry perspective in our teaching	11.30am-12.30pm	Pavlos Andreadis Sanjay Rakshit
Lunch break	12.30pm-2pm	

Afternoon Session – Developing transferrable skills:	Afternoon Session: 2-5pm	
Guest Presentation: Back to the future: shaping software engineering education with lessons from the past (abstract)	2-2.45pm	Joseph McGuire
Coffee break	2.45-3pm	Meet in Gathertown
Developing research skills	3-4pm	Felipe Costa Sperb Stefano Albrecht – pre-recorded video
Skills for the industry: Rebecca Clacy-Jones on "Employment for Informatics Students" and Pavlos Andreadis on "View of Informatics Students"	4-4.35pm	Rebecca Clacy-Jones Pavlos Andreadis
Skills for the industry: Large companies and what they require	4.35-4.55pm	Michael Glienecke
Day end	5pm	

Day 3: Assessment. Wednesday, May 11th 2022

Topic (and links to recordings after event)	**Date/Time**	**Speaker / Resources**

Morning Session – Philosophy of Assessment	Morning Session: 9-12.30pm	
Assessment in Informatics	9-9.45am	Björn Franke
Guest Speaker: Vertically integrated assessment in Physics (abstract)	9.45-10.30am	Ross Galloway, School of Physics and Astronomy
Coffee break	10.30-110am	Meet in Gathertown
Asssessment Approaches: "Let's talk about Groupwork": David Sterratt "A brief introduction to WebPA": Meredith Corey "Why and how to assess and give feedback on code (using standard tools)": Charlotte Desvages	11am-12.15pm	David Sterratt Meredith Corey Charlotte Desvages – Day 3
Update on Asssessment Plans (from ILTS and ITO)	12.15-12.30pm	Toni Noble Meredith Corey David Sterratt
Lunch break	12.30pm-2pm	
Afternoon Session – Marking Approaches	Afternoon Session: 2-4pm	
Rubrics Cube: Puzzles in designing rubric-based marking schemes		Aurora Constantin
How do we set challenging assignments without encouraging students to throw arbitrary amounts of time at them?		Iain Murray

Marking to the Common Marking Scheme with Criteria & Decision Rules		Paul Anderson
Closing Ceremony	3.30-4pm	Jane Hillston
Day end	5pm	

*** The schedule is still subject to change. As best we can we will not make big adjustments to speakers and timings.**

Informatics Teaching Festival 2021: Sharing experience and planning for online and hybrid teaching

The Informatics Teaching Festival is back for a second consecutive year.

Join us for the opportunity to:

- hear interesting presentations around lessons learned in the past year and good practice in online/hybrid teaching from colleagues and inspiring speakers from other schools
- listen to the feedback provided by student representatives regarding their experience with studying in an online/hybrid context
- listen to the feedback provided by teaching support and administrative staff as to their experience with

teaching and administration this past year
- learn about new approaches to teaching and educational software
- share your own experience with teaching delivery, student support and course administration during workshops and informal GatherTown meetings
- reflect and come up with ideas together for improving our delivery of online and hybrid teaching, both as a school and in our different courses.

If you'd like to attend any of the following sessions, and are not a member of the School of Informatics, please register your interest here, and a Collaborate link will be emailed to you in advance of the session(s).

Schedule

Topic and links to recordings	Date/Time	Resources
Opening/Welcome	Monday 7 June, 10-10.30am	Björn Franke
Keynote: Experience with online/hybrid teaching in 2 other schools	Monday 7 June, 10.30-11.30am	Charlotte Desvages Brian Rabern
Coffee break & GatherTown meet and greet	Monday 7 June, 11.30am-12pm	n/a
Student experience with online/hybrid teaching in 2020-21; Suggestions for the future	Monday 7 June, 12-1pm	n/a
Personal Tutoring and Student Support: Sharing best practice and providing views on upcoming changes	Monday 7 June, 2-3pm	n/a

Lectures in an online/hybrid context	Tuesday 8 June, 10-11.15am	Iain Murray Mary Cryan Fiona McNeill
Coffee break & GatherTown meet and greet	Tuesday 8 June, 11.15-11.45am	n/a
Teaching support staff experience with online/hybrid teaching in 2020-21; Suggestions for the future	Tuesday 8 June, 11.45am-12.45pm	n/a
Practical sessions (tutorials, labs, workshops, etc.) in an online/hybrid context	Wednesday 9 June, 10-11.15am	Fiona McNeill Pawel Orzechowski Tim Drysdale Sharon Goldwater
Coffee break & GatherTown meet and greet	Wednesday 9 June, 11.15-11.45am	n/a
Case study: practical sessions in IRR and IPP	Wednesday 9 June, 11.45am-12.45pm	IRR/IPP
Case study: Teaching Ethics in Computing	Wednesday 9 June, 3-4pm	David Sterratt email James for Shannon's paper
Assignments in an online/hybrid context	Thursday 10 June, 10-11.15am	Padlet
Coffee break & GatherTown meet and greet	Thursday 10 June, 11.15-11.45am	n/a
Exams in an online/hybrid teaching context	Thursday 10 June, 11.45am-12.45pm	Padlet
Learn Foundations: UX (Emma Horrell)	Thursday 10 June, 2-3pm	Emma Horrell

Equality and Inclusion (Decolonizing the curriculum and Congressive Teaching methods)	Friday 11 June, 10-11.15am	Decolonizing the curriculum
Coffee break & GatherTown meet and greet	Friday 11 June, 11.15-11.45am	n/a
Final reflection, Informatics Awards Ceremony	Friday 11 June, 12-1pm	will be uploaded after the session

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Paired Programming: Usage Example for Google Remote Desktop

We are aware that many of you are considering how best to support paired programming online. The Computing Team have been investigating various options here. Some are still being documented, however, please see below one potential use case using Google Remote Desktop.

*Assumes both students are using a Remote DICE desktop.

- One student runs Chrome from within their Remote DICE session (i.e.*not* on their personal device) and goes to the remote service URL.
- They click on the get support button. This gives them a unique one time use ID they must separately exchange with the other student.
- The other student runs Chrome from within their Remote

DICE session and goes to the remote service URL. They click on the provide support button and enter the unique ID.
- The first student will then be prompted whether to accept the remote connection.
- After that both students will be able to share and interact within the first students remote DICE session. The best approach to coordinating activity will be to take turns, one student driving the other navigating and then swap over.

Caveats to note:

- Since the students are using Chrome within a Remote DICE session the sharing and control is limited to that session window only as opposed to their entire personal device.
- Both students need to have a Google account. We strongly suggest that students do not use their own personal google account, if they already have one, but create throwaway ones purely for the purpose of these sessions.
- To setup a Google account you need to provide your name and mobile number for verification.
- I don’t believe there is any way to have more than two parties share the session – so won’t work for groups of more than two.
- You will need a fallback in case any students do not want to accept the T&C of a Google account. This does not need to be functionally equivalent, it can be a “lesser” experience.
- A DPIA for use of Google Remote Desktop has now been approved.

Sharing OneNote in Virtual Classroom

In the recent Exploring Whiteboard Approaches blog post we shared different ways of presenting mathematical writing using whiteboards we touched on how OneNote might be used as a tool for demonstrating handwritten content as well as a collaborative space for mathematical note taking.

To expand how how to use this approach we have added some further explanation below:

Writing Maths with OneNote

OneNote is an ideal note-taking tool that allows for simple hand-writing tools to be used, but also have a convert to maths function available.

- Create math equations using ink or text with Math Assistant in OneNote
- Change handwritten ink to text or math in OneNote for Windows 10

Writing with the ink and creating a conversion is relatively straight-forward, by using the “Fix it” option you can quickly sub-select components of your handwriting to find alternative symbols used in your maths writing.

This will need to be tried with your handwriting and device to test for suitability.

Use in Tutorial Session

To broadcast live annotations I would suggest the following approach if you have a desktop/laptop with stylus/tablet setup.

1. Use desktop/laptop for Blackboard Collaborate, and choose to share your screen
2. Use the tablet input to write your maths on OneNote
3. Your annotations will appear on the shared screen after a short delay

Potential Issues

- There are some reports the convert to maths option is not available on some tablet app versions of OneNote
- If broadcasting your screen from a desktop, but writing on a tablet with OneNote there may be slight lag in updating the Cloud version
    - Alternative is to use tablet or Wacom tethered to desktop to use OneNote

Heather Yorston has been using a similar approach and gave a short overview of this at a recent Teaching Hour with a session titled, "How do I teach Maths online?".

Exploring Whiteboard Approaches

The questions around whiteboard approaches and mathematical writing have come up numerous time throughout the summer. There has been some really interesting discussion within the School of Informatics as well as more widely within the College.

Unsurprisingly, there is no single solution that solves all of the scenarios raised by colleagues. A good starting point is to consider the ways that you might want to use a whiteboard –

we have summarised some solutions to the following approaches below:

- Live demonstration to students
- Recorded demonstration to students
- Collaborative whiteboard tutorial

The following approaches are suggestions and not the only solution. You can check out further suggestions and alternatives via the Hybrid Teaching Technology and Tools Finder.

Live demonstration to students

If you are delivering teaching via a video conferencing tool / virtual classroom you may wish to demonstrate handwritten content that you would traditionally use a whiteboard for within a classroom.

First consider if you prefer to work with digital ink or using a standard pen and paper approach.

Digital Ink

Although writing with a mouse or trackpad is possible it is often an unnatural feeling for many people, with many preferring to use a stylus attached to a computer or used directly on a tablet device.

Both Collaborate and Teams have a whiteboard that offer some basic writing and annotation tools for whiteboards. These tools are often sufficient for quick demonstrations, but do have some limitations. It is important to note that any content created in the Blackboard whiteboard will be removed at the end of the session so a screenshot should be taken if

you would like a digital copy.

An alternative tool is to use OneNote, you can broadcast your screen when writing in OneNote, but there are two additional advantages in the way that the content can be shared to students, and the writing can be converted to Math writing.

A description for how to broadcast your OneNote in a Virtual Classroom can be found in this additional post.

Pen & Paper

It may be that the easiest approach is to use pen and paper, and carefully positioning a camera or additional video-source you can broadcast your paper to the room.

You can choose the video source that you wish to share in both Collaborate and Zoom, additionally you can choose to join a meeting from an additional device such as a smart phone to use this as your additional camera source.

With a small tripod and a well-lit workspace you can share your handwritten work to the rest of the virtual classroom.

Recorded demonstration to students

You may prefer to record your demonstration as a standalone resource. This can often make it easier to focus on the task without having to consider other aspects of the technology compared to running a live demo. Another benefit of pre-recording is that the resource can be used on its own in addition to any other teaching activity.

Screen Recording or Recorded Meeting

As above, you can record your demonstration using the same tools and approaches you would as if you were running a live session. You can record a session (without other participants) in Collaborate or Teams.

How to record and view your iPad screen on desktop

You could also use Media Hopper Create to record your screen of any demonstration taking place on your screen.

Camera and Tripod

Using a camera or smartphone you could record a demonstration on whiteboard, or pen and paper.

Point the camera to a piece of paper at a reasonable distance to allow space for handwriting, but still easily legible.

Notes & Tips

- Beware of autofocus trying to switch between focus of your hand and the paper, this should be relatively minor, and most phone apps allow a fixed focus if required.
- Use a well lit room, but watch out for glare or excessive shadows
- Should be relatively easy to colour correct the footage to white by doing a white-balance on the piece of paper (post production).

George Kinnear in the School of Mathematics has written a blog describing how he uses video to share mathematical writing giving a demo of how to do this using Teams.

On Campus Resources

Most teaching rooms have a high quality visualiser that can be used to broadcast/record paper and pen.

The University has also invested in a number of media recording pop-up studios which are equipped with the equipment that you will need for a high quality recording. Some locations have the option of a “clear board” to allow you to write on a transparent board allowing you and your writing to be visible on screen at the same time.

The studio spaces are bookable in advance and are being supported within current health and safety guidance. For further Information please consult the dedicated Media studios for hybrid teaching web pages.

Collaborative whiteboard tutorial

Using a whiteboard in a Collaborative tutorial it is a little harder to pinpoint a single solution. OneNote is clearly a useful tool as it has collaboration at its core in addition to the multiple handwriting tools.

It is possible to create a Class OneNote document and allow people to work on this as they wish. You could even distribute some proforma templates pages if there are specific tasks or formats you would like the students to follow.

The School of Mathematics recently held a workshop on a variety of approaches to collaborative working with whiteboards. This workshop has been written as a short report investigating how to “Share mathematical work synchronously”. In the report they look at filming their workspace, using an online whiteboard such as notebookcast.com, working on a

collaborative document like OneNote or using LaTex in an Overleaf document.

Variety of Tools

As you will have seen there are a variety of approaches to tackle this scenario. The ILTS team are happy to advise if you have a specific use-case that you are considering. I've listed tools and resources mentioned in this post as well as some alternatives. Feel free to add more to the list using the comments below.

Hybrid Teaching Technology and Tools Finder

- OneNote
- Blackboard Collaborate
- Teams
- Microsoft Whiteboard

Other tools mentioned by colleagues

- Padlet
- Explain Everything
- AWW
- NoteBookCast
- Ziteboard
- excalidraw.com
- WhiteboardFox

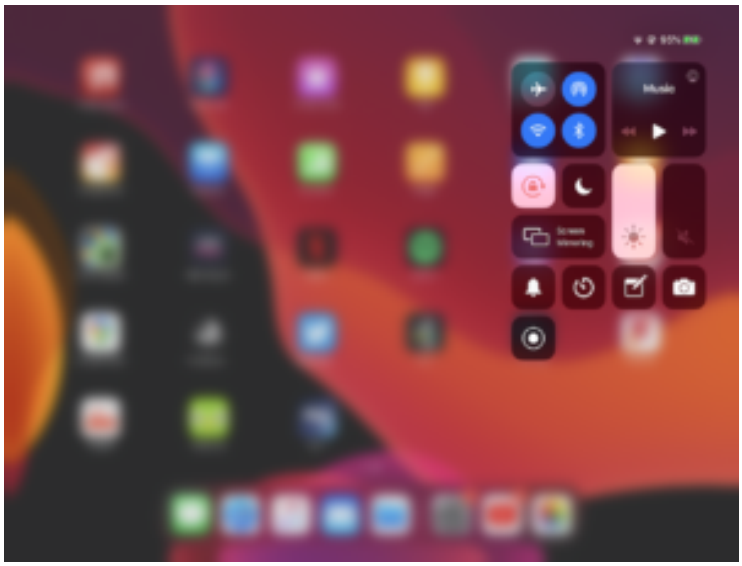
How to record and view your

iPad screen on desktop using Reflector – Guide, Advantages, Disadvantages and Alternative

This guide was written using macOS and an iPad. The Reflector software is available on Windows. Reflector can support any device using AirPlay, Google Cast or Miracast.

How to use record your iPad screen wirelessly on desktop using reflector:
1. Download and install the app here.
2. Click the Reflector app in the menu bar to see devices connected.

3. On the iPad, swiped down from the top right of the screen to access the control centre. Tap Screen Mirroring and select the desktop device you want to reflect to.



4. On the iPad image on the desktop, click the cog on the top left to choose a frame for the image and adjust the scale, device rotation and choose whether the mobile screen image floats on top.
5. Click the menu bar icon for Reflector, click the camera or microphone icon to choose to enable webcam and audio recording. Click Record all to begin the recording.
6. Click the red record button again on the iPad stream image to end the recording. Once the recording is finished you can give the recording a name and choose where to save it.

Advantages:
-Reflector supports iOS devices using Airplay and Android devices using Google Cast.
-Reflector allows you to reflect multiple devices to your desktop at once, allowing a simultaneous recording of both.
-Ability to reflect devices wirelessly by using the same network is convenient and simple to set up.
-Allows you to record screen of mobile device and webcam of desktop simultaneously.
-Allows you to record screen of mobile device while hiding it on the desktop screen.
-Places mobile device video feed on desktop screen. This means you can use other software to do a screen recording that will capture the desktop and mobile device simultaneously in one video file.

-Allows you to use frames for the device’s feed e.g. you can make an iPad video stream look like an actual iPad device.
-Changeable video quality settings, as well as different frame rate recording options to help decrease video file size.
-Reflector teacher allows use with reflector director, reflector student and is preconfigured for classrooms.

Disadvantages:
-Due to the connection to the mobile device being wireless, there is potential for lag in the recording if the network is weak.
-The trial version of the app has a significant watermark on recordings.
-Can’t screen record desktop and mobile device at same time on its own.
-Difficult to change the scale of the image on the screen.
-If mobile device recording is separate from other components of lecture recording, the 2 videos would need to be synced up after recording.

Alternative – How to record the iPad using QuickTime Player (wired connection):

1. Plug your iPad into your Mac and launch QuickTime Player, built into macOS.
2. On the app menu bar, click File>New Movie Recording.
3. On the video control panel, click the downward arrow beside the record button and select your iPad as the video and audio source.
4. Click the record button. When you are done recording click the stop button.