



THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

# Department of Electronic & Computer Engineering

電子及計算機工程學系

## ELEC 1020

**Media Production: Technology and Design**

**Lecture 1 – Overview and the Start of our Media Journey**

Prof. James She ([james.she@ust.hk](mailto:james.she@ust.hk))



# About Me

- Assistant Professor, Electronic & Computer Engineering, HKUST
- Founding Director, HKUST-NIE Social Media Lab., ECE, HKUST.
- Visiting Research Fellow, Computer Laboratory, U. of Cambridge, UK



## Research Interests:

- 1) Social Media and Computing;
- 2) Analytics and Systems for Big Data;
- 2) Interactive Media System and Production



## TEAM



Prof. James She  
Director



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Visiting Scholar



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Alvin Junus  
MPhil Student



Jeon Kang Eun  
MPhil Student



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Jiqing Wen  
MPhil Student

## Projects:

### [Digital Social Networks]

- *interests predictions in social networks*
- *human location and mobility prediction in social networks*
- *tipping point of viral media in social networks*

### [Cyber-physical Social Systems/Networks]

- *cyber-physical media*
- *interactive and tangle media*
- *big data systems*

and more on

[http://v.youku.com/v\\_show/id\\_XNjMxMDY5NzA0.html](http://v.youku.com/v_show/id_XNjMxMDY5NzA0.html)



# Outcomes from this lecture

1. What's Media?
2. Course Overview
3. Design Principles

# What's Media? Is it...



SafeSearch ▼

**Web**

Images

Maps

News

Books

More ▼

Search tools

About 7,770,000,000 results (0.44 seconds)

## Media - Wikipedia, the free encyclopedia

[en.wikipedia.org/wiki/Media](https://en.wikipedia.org/wiki/Media) ▼

**Media** may refer to: Contents. 1 Communications; 2 Computing; 3 Fine art; 4 Life sciences; 5 Locations; 6 Music; 7 Phonology; 8 Ships; 9 See also ...

### Mass media

The mass media are diversified media technologies that are ...

### Media (communication)

Media (singular medium) are the storage and transmission ...

### Digital media

Digital media are any media that are encoded in a machine ...

[More results from wikipedia.org »](#)

### Social media

Social media is the social interaction among people in ...

### News media

The news media are those elements of the mass media that ...

### Electronic media

Electronic media are media that use electronics or ...





# What's Media? (Before)



# What about Digital Media /Multimedia?

Various new digital media forms along with emerging display, mobile, communication Technologies, devices/gadgets and applications:

- Text, Web, Hypertext (links)
- Audio (Surround sounds)
- Image
- Animation
- Video (3D)
- Email, Internet, Social Media and Networks
- Mobility and Location (from your smart phones)
- Gesture?
- Smells?
- Or more

# What about Digital Media?





# What about Digital Media?

New forms of media from new technologies/systems

A Day Made of Glass



<https://www.youtube.com/watch?v=PfgmIVxLC9w>

## **In our course, Media at least include:**

- 1. Content (or messages) in the format of Digital Media**
- 2. Medium (or technical/ physical platform)**
- 3. Production, Delivery, and Presentation**

## In-class Activity (Group, 5 mins): What's Media?



Requirements/Constraints of

- Production: 1-2 best answer
- Delivery: 1-2 best answer
- Presentation: 1-2 best answer

Medium

- 1.
- 2.
- 3.

Content

- 1.
- 2.
- 3.

**Outdoor Billboard  
Media**

**So, what exactly is**

**ELEC 1020 –**

**Media Production:  
Design and Technology**

# Media Production: Design and Technology





# Media Production: Design and Technology

## In a nutshell

	Design	Technology
Pre-Production	<ul style="list-style-type: none"><li>• Identify purposes</li><li>• Design principles</li><li>• Ideas /concepts</li><li>• Prototypes</li></ul>	<ul style="list-style-type: none"><li>• Storyboard</li><li>• Script</li></ul>
Production	<ul style="list-style-type: none"><li>• Shooting and acting</li><li>• Venue &amp; camera set-up</li><li>• Sound recording</li><li>• Programming</li><li>• etc.</li></ul>	<ul style="list-style-type: none"><li>• Camera</li><li>• Display resolutions</li><li>• Choice of microphones</li><li>• Stereo sounds</li><li>• etc.</li></ul>
Post-Production	<ul style="list-style-type: none"><li>• Editing of image, animation, audio and video</li><li>• Choices/ styles of effects</li><li>• etc.</li></ul>	<ul style="list-style-type: none"><li>• Background keying</li><li>• Adobe Photoshop, Audition, Premiere, After Effect</li><li>• Performance and feature testings</li><li>• etc.</li></ul>

# ELEC 1020

## Focus on getting you enough backgrounds

1. Latest digital media technologies, systems and apps
  2. Hands-on experiences to:
    - editing, produce, process and production
    - design/develop interesting multimedia applications
  3. Weekly laboratory, projects in-/out-of-class to inspire you
- watch-out:**  
**bonus questions in the class, yes, to make you attending**

# Intended Learning Outcomes

Let you to:

- develop a good senses of sciences, engineering, arts and businesses using the power of digital media
- dare to dream and create things that changes the world or make it interesting through digital media
- think and present your ideas/works creatively with originality;
- work independently but also effectively as a team;

enGINEERING + IMAGINing + ➔ IMAGINEERs

# Intended Learning Outcomes

<https://www.youtube.com/watch?v=SqTk9HzTrjU>



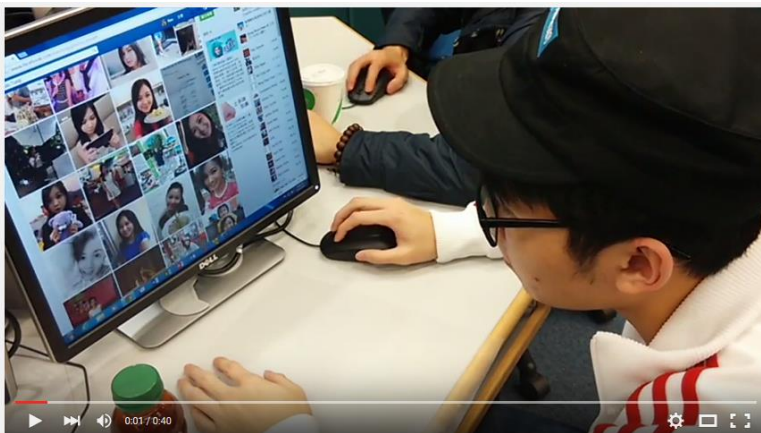
[www.youtube.com/watch?v=2b97KIIJuYs](http://www.youtube.com/watch?v=2b97KIIJuYs)

# Previous students works





# Previous students works



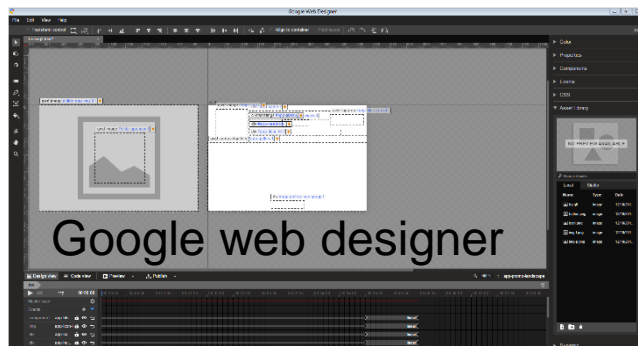
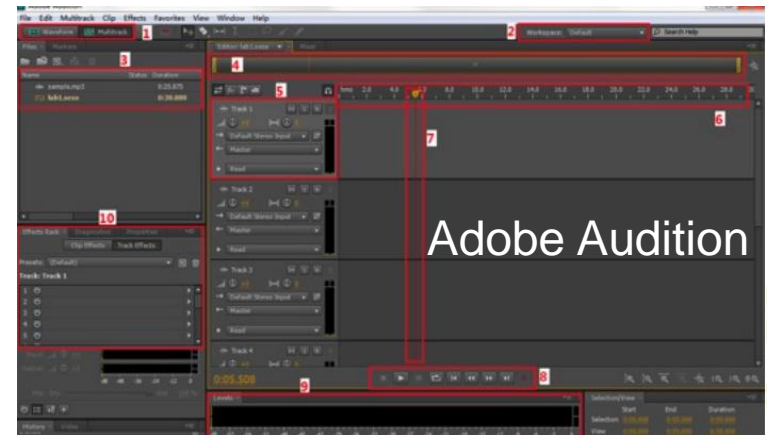
<https://www.youtube.com/watch?v=AEYOk0D0msc>



<https://www.youtube.com/watch?v=k24iLar2nYY>

# Unique in ELEC 1020

## Media software for learning



# Unique in ELEC 1020

## Media tools for learning



- sound effects for interactive media

- 360 video



- chroma Key

# ELEC1020 for your future career

- Apps or software UI designer
- web-based and mobile gaming developer
- video producer and media engineer
- sound engineer
- theater effect engineer
- performance/stage effect engineer
- cyber-physical actors or artists!



**NEXTmedia**

 **Asiaray** 雅仕维

 **CYBERPORT**  
數碼港



HKUST-NIE Social Media Lab



# ELEC1020 for your future career





# Course Website

[course.ee.ust.hk/elec1020](http://course.ee.ust.hk/elec1020)

## ELEC 1020 [2-0-3:3]

Media Production: Technology and Design

Information

Lectures

Labs

References

Course Works

Scores

Previous Works

Last update:  
Jan 08, 2016

### Course Description


The course focuses on both the high level design concepts for creative multimedia marketing, as well as equipping the students with the necessary tools to manipulate digital media. The course covers design principles, human perceptions, evaluations of digital media as well as fundamental implementation skills such as audio data processing, special image effects, and video handling techniques.

### Learning Outcomes



At the end of the course, you should be able to:

- come up with design concepts of a digital media presentation for selected target audiences or purposes;
- analyze and evaluate digital media from artistic, business and technical perspectives;
- create digital media (e.g., web, image, animation, video) using multimedia tools;
- Adopt online multimedia systems/ networks with their prepared digital media to convey for themselves, companies and organizations.

### Instructor








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### TAs

	Ming CHEUNG: <a href="mailto:cpming@ust.hk">cpming@ust.hk</a>
	

# Our teaching team

## TAs

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# Assessment Scheme

(some adjustment to be finalized in this week)

## 1. In-class activities:

analyzing and evaluating various digital media will be conducted in 6-8 of the lectures

10%

## 2. Labs:

8 labs with various hand-on learning experiences

30%

## 3. One-page mid-term exam:

open notes, open books, open everything

10%

## 4. Individual mid-term project:

apply what learnt before mid-term period to produce some interactive media for some business or organizational or personal purposes

25%

## 5. Group final project:

A digital video promoting selected business messages or social values for a profit/non profit-organization

25%

# Course Facebook Page

<https://www.facebook.com/2016springelec1020>



**Elec1020, 2016 Spring** updated their profile picture.

**All announcement and production submissions there**

**Connect us on Facebook today for 1% of out-class activity one!**  
**(Due tomorrow noon)**

## History about Grades, Workload, Fun levels

last 2 years 30-33% (A+, A, A-)

### warnings:

- a lot of production works and brain-efforts needed
- but very fun and practical!
- so no pain, no gain and no complaints, if you decide to take this course.



# FAQ

1. Enrollment – can we add extra seats?  
No, limited by the lab and license capacity
2. How much programming needed?  
Minimal, only high school-level programming
3. Any other questions?



**10 mins. break**



# Media Production: Identifying the purposes

## Recall

## Media Production: Design and Technology In a nutshell

	Design	Technology
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# Media Production: Identifying the purposes

## All about passing information effectively

### Examples

1. Marketing becomes Digital
2. Trends of Businesses / Services Offerings
3. Technologies Products (looks at your smartphones)
4. From Personal Uses, to Business and even Governments or NGOs
5. etc.

# Design... ...Principles



# Design Principles

## Creating the right digital media

*Anyone know how to  
create a powerpoint slide?*

*but are you sure that you  
could make a good one?*



<http://www.youtube.com/watch?v=lpvgfmEU2Ck>

# Design Principles

## Maximize the marketing impacts



*Is the perceived message*

1. *correct?*
2. *clear and complete?*
3. *reaching the right group of audience?*
4. *covering enough audience?*
5. *sticky to the audience (i.e., people get impressed and remember)?*

➔ *The more 'Yes' above, the audience have more perceived impacts.*

# Design Principles

## A. Understanding the original marketing message

1. what is the contextual meanings?
2. any other cultural meanings?
3. from who (e.g., a charity)? to who (e.g., student)?
4. what impression/ image is needed?
5. how long is aimed to last?
6. etc.

# Design Principles

## B. Knowing more about your targeted audience

1. what are the environments they perceive the message?
2. what are their ages? and demographics?
3. what are the common languages?
4. their cultures?
5. their educational backgrounds?
6. etc.

# Design Principles

## C. Identifying the right digital media and multimedia technologies

1. Making it artistically and technically looking good/pretty?
2. Is it the right media type (e.g., text, song, photo, video, etc.) and the form of presentation/delivering (e.g., email? facebook?)
3. the perceptual meanings (e.g., visually) aligned to the meanings of the original message?
4. Is the media effect (e.g., loudness, tones, styles) aligned to the original message?
5. Is it a right mix of various digital media?
6. etc.



# Design Principles

## Imagining and Engineering

1. Come up with a few sketches of design concepts (e.g., a visual story, a static image, an audio clip) that meet  $A + B + C$
2. Refine or combine these
3. Implement within the constraints in terms of time, manpower, budget, space, etc.
4. Go back to 2. or 1. until you feel good!

# Design Principles

## A Good Example of Bad Design: British Doors



*“...The door on the left tells us to push, but is locked shut for some strange reason. The one on the right does open but the handle tells us to pull.”*

*Doors are not new technology. You’d think people would have figured out how to design their function and form to facilitate use. Not always.”*

*(from <http://www.cashewman.com/2009/12/a-good-example-of-bad-design-british-doors/>)*

# Announcements

- Lab 1 starts in week 3 (Feb 18 and 19)



YEAR OF THE MONKEY

## Questions? Comments?

So, will you enroll this course?

## - End of Lecture 1 -