Studying MOOCs and Doing MOOCs Sharing Session – MITx Courses

15:30 – 17:00 Roy Kam(EDC), Instructional/Learning Design Specialist, Member of PolyU's MOOC Steering Group, roy.kam@polyu.edu.hk

Facilitator's Background



Ex-undergraduate student





Scholarship recipient + postgraduate (eLearning)

Contributing to the eLearning field in HK for at least 3 years after graduation was a requirement

Educational design professional in various contexts, particularly in eLearning















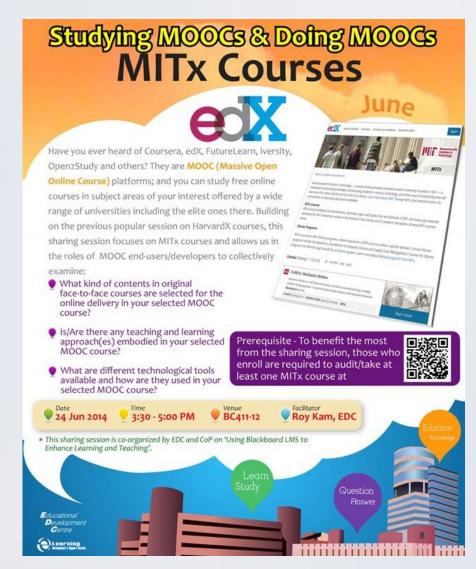


Part of a Series of MOOC-related Sessions



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Key Agendas Today

Learning Development & Support Section

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MOOC Meetup

Educational Design & Experience of OCs

Learning from the Elite University – MITx Courses

8.MReVx: Mechanics ReView

Mechanics ReView is an MIT-level introductory mechanics class emphasizing a strategic problem-solving approach. It covers the same syllabus topics as the Advanced Placement Mechanics-C course.

STARTS: 29 May 2014 INSTRUCTORS: David E. Pritchard MITx



MAS.S69x: Big Data and Social Physics

Understanding big data, how to use it to improve companies, cities, and government, and best-practice for privacy

STARTS: 12 May 2014 INSTRUCTORS: Alex Pentland MITx



3.091x: Introduction to Solid State Chemistry

3.091x explains chemical principles by examination of the properties of materials.

STARTS: 12 May 2014 INSTRUCTORS: Michael Cima MITx



6.SFMx: Street-Fighting Math

Teaches, as the antidote to rigor mortis, the art of educated guessing and opportunistic problem solving.

STARTS: 8 Apr 2014 INSTRUCTORS: Sanjoy Mahajan MITx



1 2 next > last »

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EdX offers interactive online classes and MOOCs from the world's best universities. Online courses from MITx, HarvardX, BerkeleyX, UTx and many other universities. Topics include biology, business, chemistry, computer science, economics, finance, electronics, engineering, food and nutrition, history, humanities, law, literature, math, medicine, music, philosophy, physics, science, statistics and more. EdX is a non-profit online initiative created by founding partners Harvard and MIT.

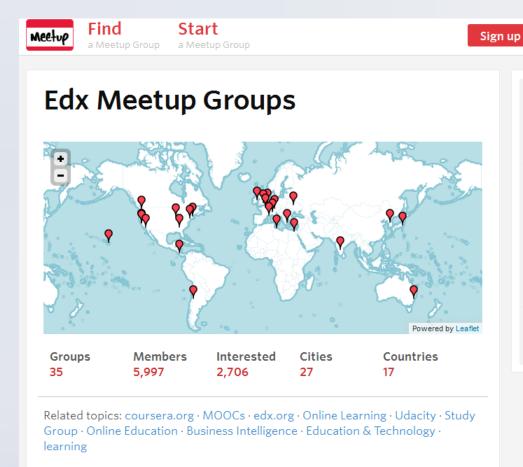


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Who have audited/taken at least 1 MITx Course?

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Find a Edx
Meetup Group
near you

Country
USA

ZIP

Search

Log in



Are you Ready to Learn Collectively?

Looking Backward, Looking Forward



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*****Online Materials *****Online Courses

*****Massive Open Online Courses







* TED surpassed a billion video views on 13 November 2012



~PolyU adopted WebCT







1997 1998 2000 2002

2006

2012

Discussion I (15 mins)



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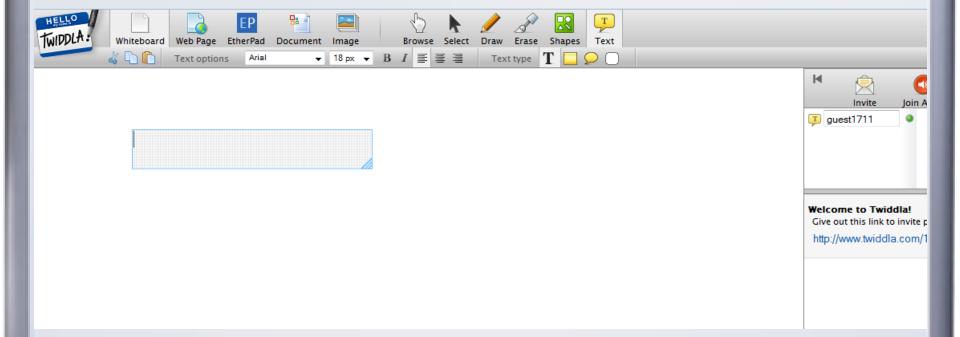
- Can't the *online materials as just seen be massively open?
- Can't the *online courses as just seen be massively open or non-massively private (i.e. SPOC)?
- What are the major differences between
 MOOCs and the previous round of * and *?

➤ Feel free to use the notebook on your table if your group wants to know more about the cited examples.

Time for Our Collective Ideas

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➤ More thoughtful; more beneficial http://www.twiddla.com/xxxxxxx



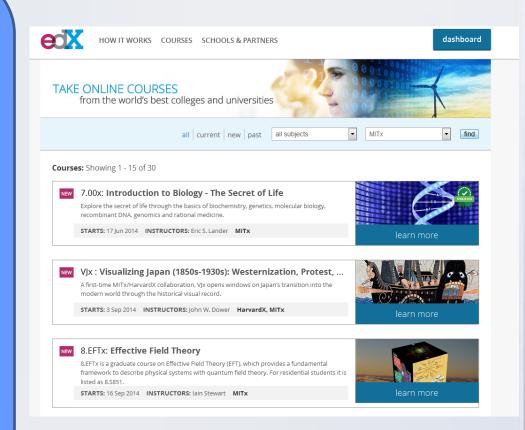
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A Closer Look at MITx Courses



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- ➤ Our attendees for HarvardX Courses were from AMA, AP, BME, BRE, BSE, CBS, COMP, CPA, EDC, ELC, HKCC, HTI, IAEE, IC, IfE, ISE, ITC, ITS, LIB, LSGI, ME, P, RS, SAO, SHTM, SN, etc.
- ➤ This time, AF, AMA, APSS, CEE, COMP, EDC, ELC, HKCC, HTI, IfE, ISE, ITC, LIB, RS, SHTM, SN, SO, etc



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Studying Moocs & Doing Moocs MITx Courses



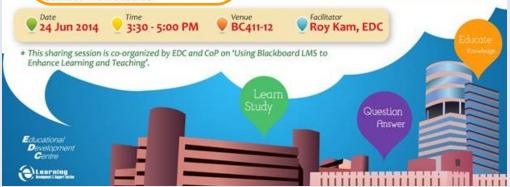
Have you ever heard of Coursera, edX, FutureLearn, iversity, Open2Study and others? They are MOOC (Massive Open Online Course) platforms; and you can study free online courses in subject areas of your interest offered by a wide range of universities including the elite ones there. Building on the previous popular session on HarvardX courses, this sharing session focuses on MITx courses and allows us in the roles of MOOC end-users/developers to collectively



- What kind of contents in original face-to-face courses are selected for the online delivery in your selected MOOC course?
- Is/Are there any teaching and learning approach(es) embodied in your selected MOOC course?
- What are different technological tools available and how are they used in your selected MOOC course?

Prerequisite - To benefit the most from the sharing session, those who enroll are required to audit/take at least one MITx course at







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Discussion II (15 mins)



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Content Selection

- > Are contents adapted (i)parts of the same campus-based course or (ii)from the whole campus-based course?
- > Are contents more appropriate for (i) the MOOC delivery or (ii) the MOOC delivery in a blended mode?

Learning & Teaching Experiences

- ➤ Instead of classifying MOOCs into cMOOC, xMOOC, pMOOC, etc, what are the eclectic experiences of learning and teaching you find them (i)good or (ii)bad?
- > Do you learn mainly from (i)the teaching team or (ii)classmates or (iii) others?
- > Participatory? Passive? Collaborative? Unstructured?

Technological Tools Available

> What are the (i)edX-based and (ii)non-edX-based technological tools to assist the learning and teaching?

Content Selection







...designed to help people with no prior exposure to computer science or programming learn to think computationally and write programs to tackle useful problems.

The original textbook for 6.00 and the course lectures parallel each other...

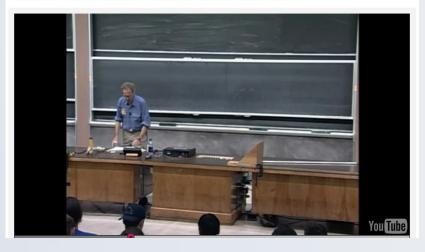
Home » Courses » Electrical Engineering and Computer Science » Introduction to Computer Science and Programming Introduction to Computer Science and Programming **OCW Scholar** COURSE HOME Instructor(s) Prof. John Guttag **SYLLABUS** Level Undergraduate SOFTWARE REFERENCES **■ UNIT 1 ■ UNIT 2** Many of the problem sets focus on specific topics, such as virus **■ UNIT 3** population dynamics, word games, optimizing routes, or simulating the movement of a Roomba. (Roomba photograph courtesy of Stephanie Booth on Flickr; virus image courtesy of the CDC; Boggle photograph courtesy of Angelina on Flickr; MIT campus DOWNLOAD COURSE map image courtesy of RahulG on Flickr.) MATERIALS

Learning & Teaching Experiences

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LECTURE 1 VIDEO SEGMENT 2: MEASUREMENT UNCERTAINTY



Video-taped Interactive Lecture

Video-taped Head Talk

TYPES OF KNOWLEDGE

Imperative knowledge

- Here is a "recipe" for deducing a square root of a number X – attributed to Heron of Alexandria in the first century AD
 - · Start with a guess, c
 - If g*g is close enough to x, stop and say that g is the answer
 - · Otherwise make a new guess, by averaging g and x/g
 - Using this new guess, repeat the process until we ge close enough

Learning & Teaching Experiences



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Which of the following are prerequisites for this course?

- Calculus, prior programming experience
- Statistics, prior programming experience
- High-school level algebra
- High-school level algebra, prior programming experience

Check



Show Answer

You have used 1 of 3 submissions

FORMULA ENTRY (1/1 point)

Enter the algebraic expression $A \cdot x^2 + \sqrt{y}$ in the box below. The entry is case sensitive. The product must be indicated with an asterisk, and the exponentation with a caret, so you must write "A*x^2 + sqrt(y)".

 $A*x^2 + sqrt(y)$



Longest substring in alphabetical order is: beggh

In the case of ties, print the first substring. For example, if | s = 'abbbed' |, then your program should print

Longest substring in alphabetical order is: abc

For problems such as these, do not include <code>raw_input</code> statements or define the variable <code>s</code> in any way. Our automating testing will provide a value of <code>s</code> for you - so the code you submit in the following box should assume <code>s</code> is already defined. If you are confused by this instruction, please review L4 Problems 10 and 11 before you begin this problem set.

Note: This problem is fairly challenging. We encourage you to work smart. If you've spent more than a few hours on this problem, we suggest that you move on to a different part of the course. If you have time, come back to this problem after you've had a break and cleared your head.

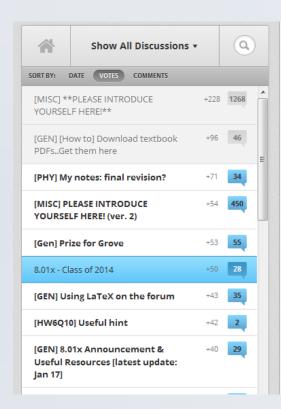
1 # Paste your code into this box

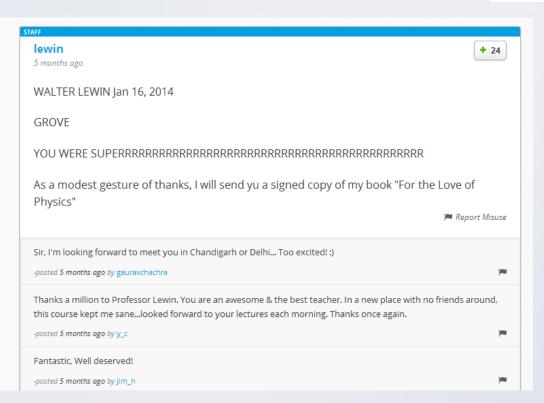
Practice/Assessment Items

Learning & Teaching Experiences



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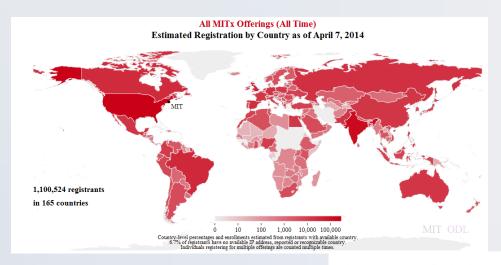


Interaction with Classmates,TAs and Teachers

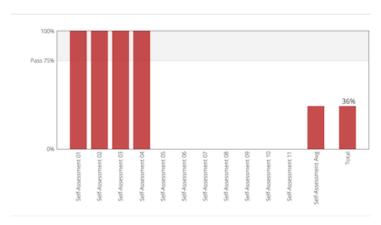
Technological Tools Available



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Course Progress for Student 'zacharydavis' (zachary_davis@harvard.edu)



Introduction

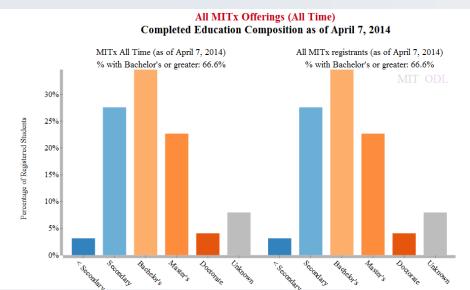
Day 1: Welcome and Introduction

No problem scores in this section

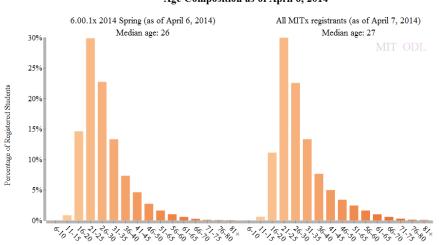
Technological Tools Available



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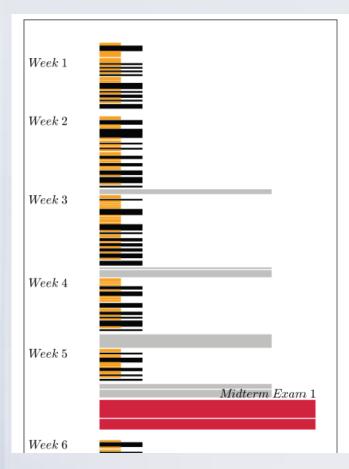


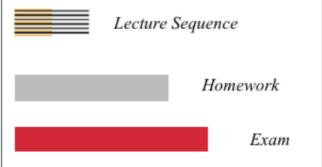


Technological Tools Available



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Course Resources	Total Number
Videos	150
Problems	372
Html pages	53

Figure 1: (Left) Course structure visualization highlighting course resource density, where the y-axis represents the temporal order of resources in the course. (Top) A legend providing context for each course component.

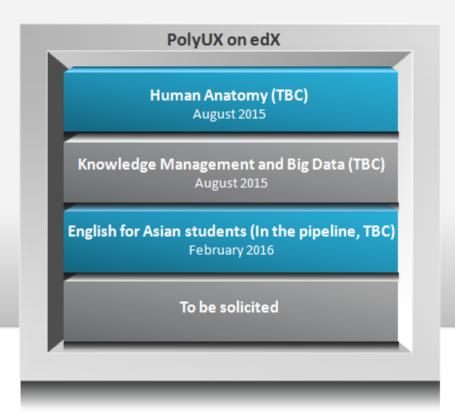
Course structure refers to the type, frequency, and order of resources in a given course. Within a MITx course on edX², course structure is composed of a few base resource types (problems, videos, html pages), each categorized under a specific course component. Figure 1 visualizes the 575 resources of 6.00x in terms of their course component categories, where each line indicates a

To edX End-users & Developers



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Planned subjects to be launched on edX.org



*Extracted from the MOOC Journey at PolyU presented by Prof. Eric Tsui in the 1st PolyU MOOC Steering Group Meeting on 19 June 2014.

Before You Go...



Your feedback is valuable to the sharing session

- Have we fulfilled your expectations?
- Have we met our goals for the session?

