

ОТКРЫТЫЕ ОБРАЗОВАТЕЛЬНЫЕ РЕСУРСЫ : ОБ ОПЫТЕ И ПЕРСПЕКТИВАХ



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5. Новые возможности – новые проблемы
6. Перспективы

ОТКРЫТЫЕ ОБРАЗОВАТЕЛЬНЫЕ РЕСУРСЫ

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2002 г.: 1-й форум ЮНЕСКО по Открытым образовательным ресурсам (ООР)

ООР – образовательные материалы и средства, свободно доступные в Интернете и предназначенные для использования в учебном процессе

- *авторы дали согласие на свободное использование и переработку*
- *правовая конструкция: семейство лицензий Creative Commons (CC)*

СЕМЕЙСТВО ЛИЦЕНЗИЙ CREATIVE COMMONS

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BY - «Attribution» – указывать авторство

SA - «ShareAlike» – распространение на тех же условиях

NC - «NonCommercial» – некоммерческое использование

ND - «NoDerivs» – без производных произведений

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) OPEN COURSEWARE

5

Unlocking Knowledge,
Empowering Minds.

Free lecture notes, exams, and videos from MIT.
No registration required.
[Learn More](#)

Support OCW

I need to understand spoken English and improve my scientific knowledge. There's nothing better than lectures on my scientific areas.

Luiz
Self Learner
Brazil

[DONATE NOW](#)

FEATURED COURSES

View All Courses

OCW makes the materials used in the teaching of MIT's subjects available on the Web.

Get Started

OCW NEWS

MEET OUR INSTRUCTORS

Hal Abelson Eric Niebler Singam Muralidharan

Prof. Harold Abelson
MIT Professor of EECS

"It's actually a little bit scary to me, because

Highlights of Calculus

- **2001 г. Инициатива MIT**
Открытая публикация материалов учебных курсов в Интернете
- **2003 г. Официальное открытие**
 - кол-во курсов: 50
 - лицензия: CC BY NC SA
 - <http://ocw.mit.edu/index.htm>
- **2012 г.**
 - кол-во курсов: 2150
 - кол-во уникальных посетителей: 53 млн.
 - 40 –50 % пользователей сайта обучаются самостоятельно

OPEN COURSEWARE CONSORTIUM

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OPEN COURSEWARE CONSORTIUM

ABOUT US COURSES COMMUNITY MEMBERS

Getting Started

- What is OpenCourseWare?
- Become a Member
- See Current Members
- Visit OCW Websites
- Find Courses
- Get Involved
- Contact Us

Newsletter

CLICK HERE TO SUBSCRIBE

Open Education Week
March 11-15 2013

Open Education Week 2013
Read more

JOIN NOW

The OpenCourseWare Consortium is a collaboration of higher education institutions and associated organizations from around the world creating a broad and deep body of open educational content using a shared model.

Announcements

LINC conference to focus on MOOCs

Mar 26 COCCOER webinar: Learn about OER Authoring Tools

UC Irvine Announces OpenChem

In the News

Thu 14 Mar 2013 // Open Education Take Back The Curriculum Information Week Education

Wed 13 Mar 2013 // Outsourcing Public Higher Ed Inside Higher Ed

Tue 12 Mar 2013 // 12 Open Educational Resources: From Khan to MIT Information Week Education

Sponsors

THE WILLIAM AND FLORA HEWLETT FOUNDATION

Sustaining Members

- African Virtual University
- China Open Resources for Education
- Japan OCW Consortium
- Johns Hopkins Bloomberg School of Public Health

Events Calendar

March 2013

S M T W T F S

1 2

2005 г. Создание консорциума университетов

Основная задача:

внедрение и адаптация открытых образовательных материалов для использования по всему миру

2013 г.

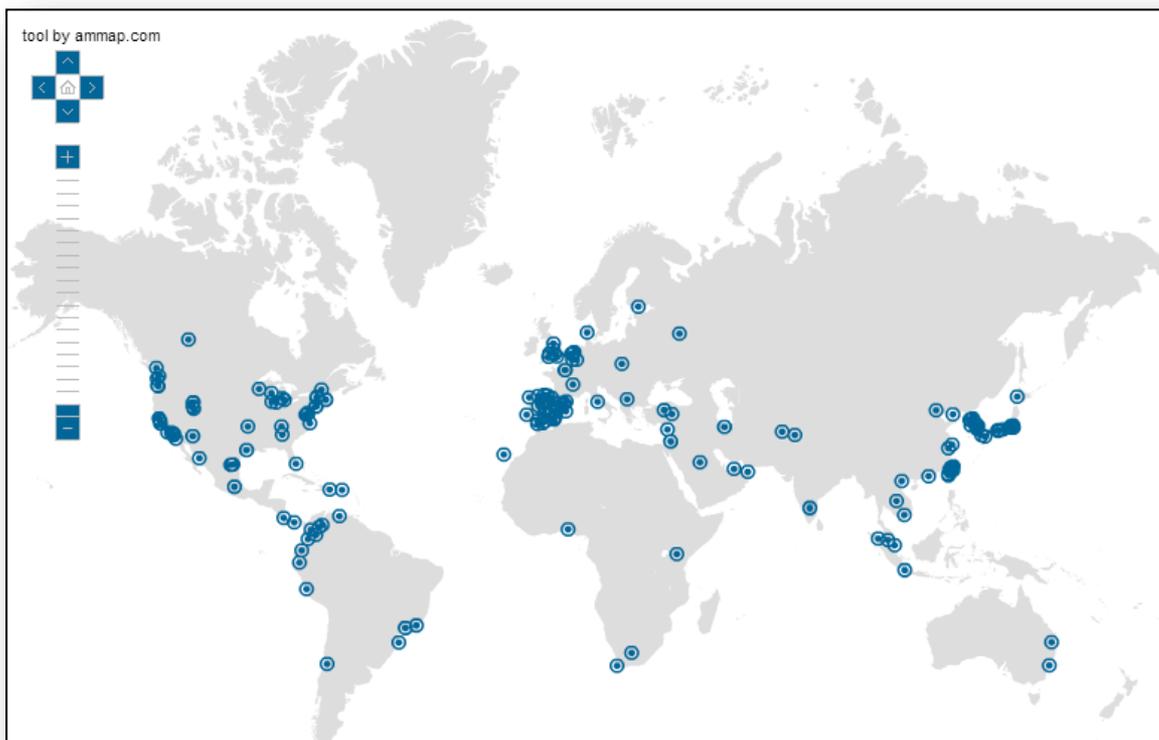
Кол-во курсов: \approx 6500 на 27 языках (>> 2000 курсов MIT)

<http://ocwconsortium.org/>

Прикладные науки, искусство, компьютерные науки, география, здоровье и медицина, гуманитарные науки, языки, математика, естественные науки, религия, социальные науки

OPEN COURSEWARE CONSORTIUM

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Стран-участниц: 47
(ежегодный взнос в зависимости от категории участника)

Кол-во университетов (по странам): 1—>>30

Кол-во курсов (по университетам): 1 – >>2000

Россия:

Московский архитектурный институт

Кол-во курсов: 24

ПРИМЕРЫ ООР-ПРОЕКТОВ

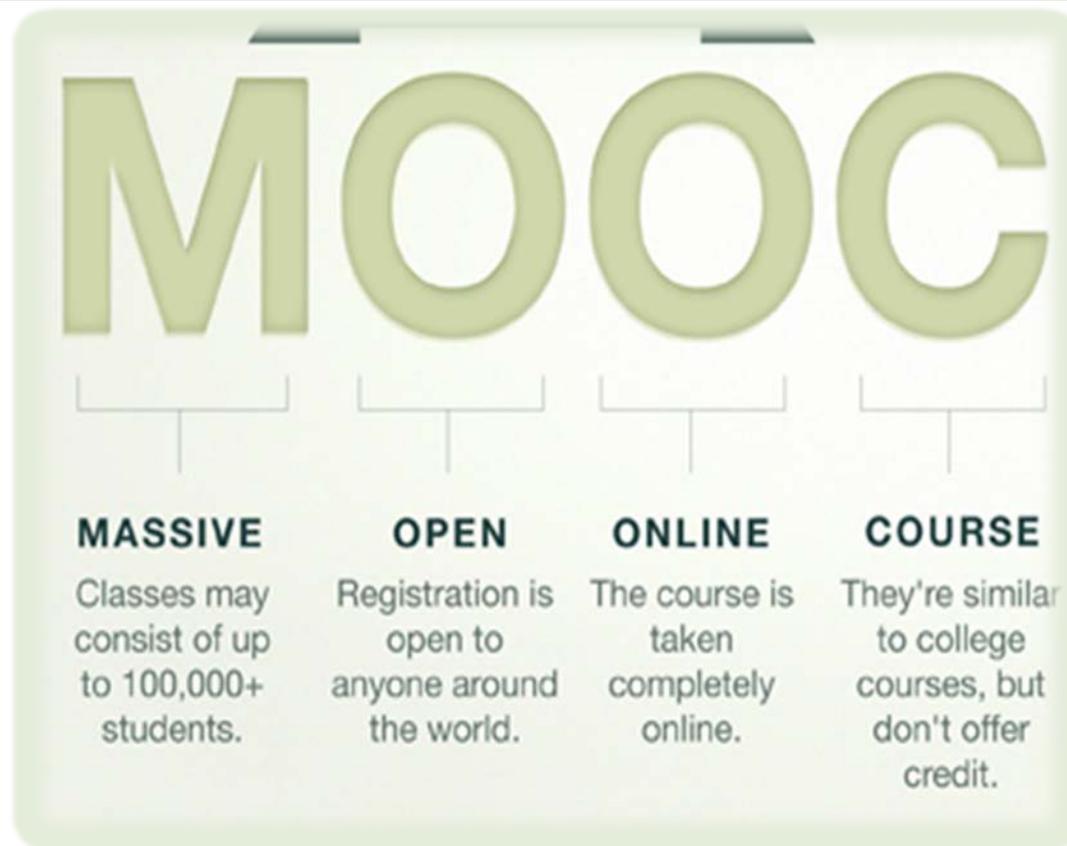
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Commonwealth of Learning (Канада)	http://www.col.org
OCW – University of California (США)	http://ocw.uci.edu
OpenLearn – The Open University (Великобритания)	http://www.open.edu/openlearn/
OER Africa (ЮАР)	http://www.oerafrica.org
Open University of Israel (Израиль)	http://ocw.openu.ac.il
OCW KU Leuven (Бельгия)	http://ocw.kuleuven.be
Carnegi Mellon University Open Learning Initiative (США)	http://oli.cmu.edu/
Stanford online (США)	http://online.stanford.edu/

МАССОВЫЕ ОТКРЫТЫЕ ОНЛАЙН КУРСЫ

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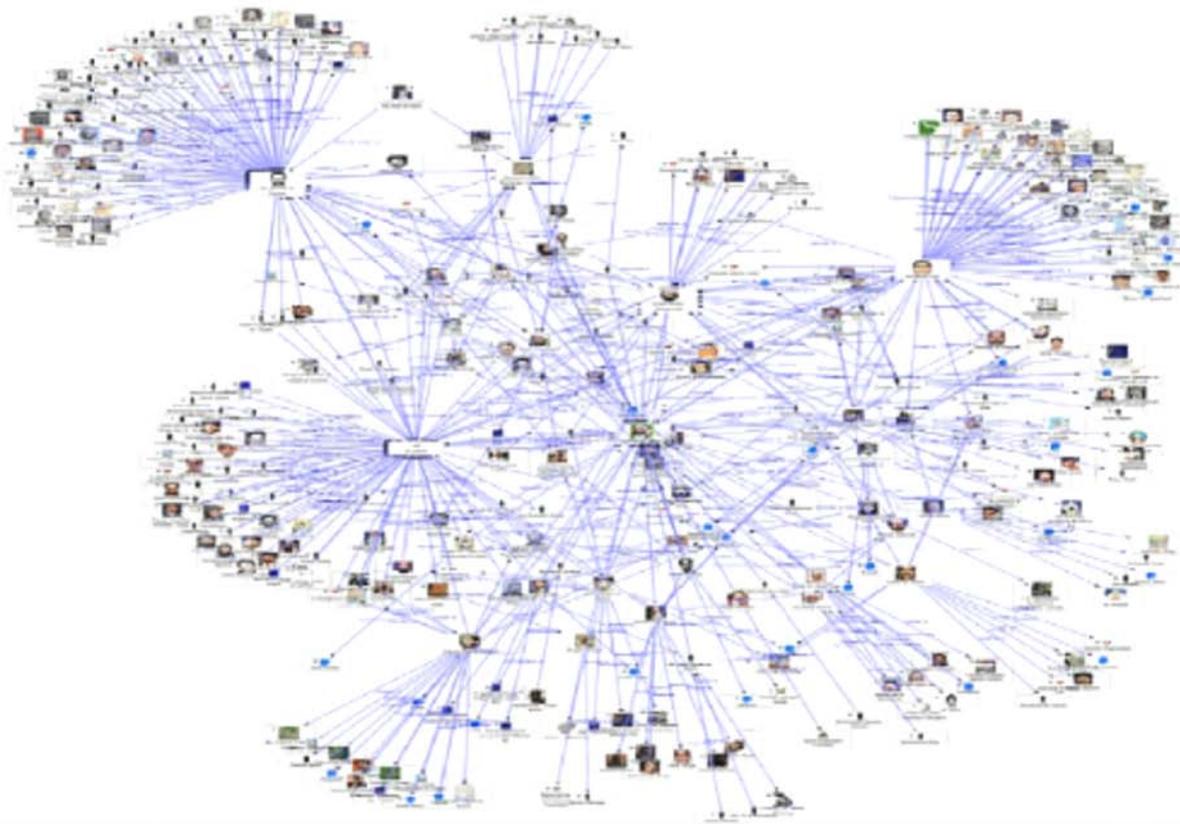
- >> 100 000 участников одновременно
- Бесплатность
- Доступность
- Возможность начать и закончить обучение в любое время
- Отсутствуют кредиты
 - **Высокая мотивация участников**
 - **Сотрудничество**
 - **Применение сервисов web 2.0 для обучения**



ИДЕЯ ОТКРЫТЫХ КУРСОВ

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Обучение - есть процесс построения сети



- **Коннективизм:**
Обучение как процесс формирования сети и принятия решения
- **Персональная учебная среда:** учащиеся не только потребляют учебные ресурсы, но и сами их производят
- **Обучение:**
производство информации и знаний

<u>Inclusive Technologies for Reading</u>	Возможность подробно изучить спектр бесплатных и недорогих технологий, которые могут быть использованы для улучшения чтения (для людей с нарушениями зрения)
¹¹ <u>#etmooc – educational technology and media</u>	Курс посвящен вопросам интеграции образовательных технологий и средств массовой информации в учебный процесс
<u>Open Learning Design Studio MOOC</u>	Проектирование учебной программы с использованием ООР
<u>Mechanical MOOC</u>	Введение в программирование на языке Python
<u>Differentiating Instruction through Technology</u>	Об использовании технологий с целью удовлетворения индивидуальных потребностей всех учащихся
<u>MOOC Maker Course 2013</u>	Курс на немецком языке, посвященный разработке, планированию и запуску MOOC
<u>Contemporary Latin American literature – MOOC</u>	Знакомство с современной латиноамериканской литературой (на испанском языке)
<u>E-learning and Digital Cultures</u>	Исследование возможностей связи цифровой культуры и культуры обучения, и что это означает для теории и практики электронного обучения
<u>ds106: Digital Storytelling</u>	Курс посвящен вопросам взаимодействия между людьми
<u>Open Course in Technology Enhanced Learning (OCTEL)</u>	Об использовании технологий для повышения качества обучения

ХМООС: ОСНОВНЫЕ ЧЕРТЫ

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- Набор учебных материалов
- Система тестов и заданий для текущего и промежуточного контроля
- Заранее определенные сроки выполнения заданий
- Непрерывное сопровождение преподавателя
- Сертификат участника
- Не учитываются в учебном плане (безкредитные)
- Обучение проходит на специальной платформе
- Большое количество участников
- Доступность
- Бесплатность
- Курсы от ведущих университетов

XMOOC

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POPULAR PLACES TO TAKE MOOCS

coursera

edX

U
UDACITY



TYPE OF INSTITUTION



For-profit



Nonprofit



For-profit



NUMBER OF COURSES

210+

25

22



ORIGINS

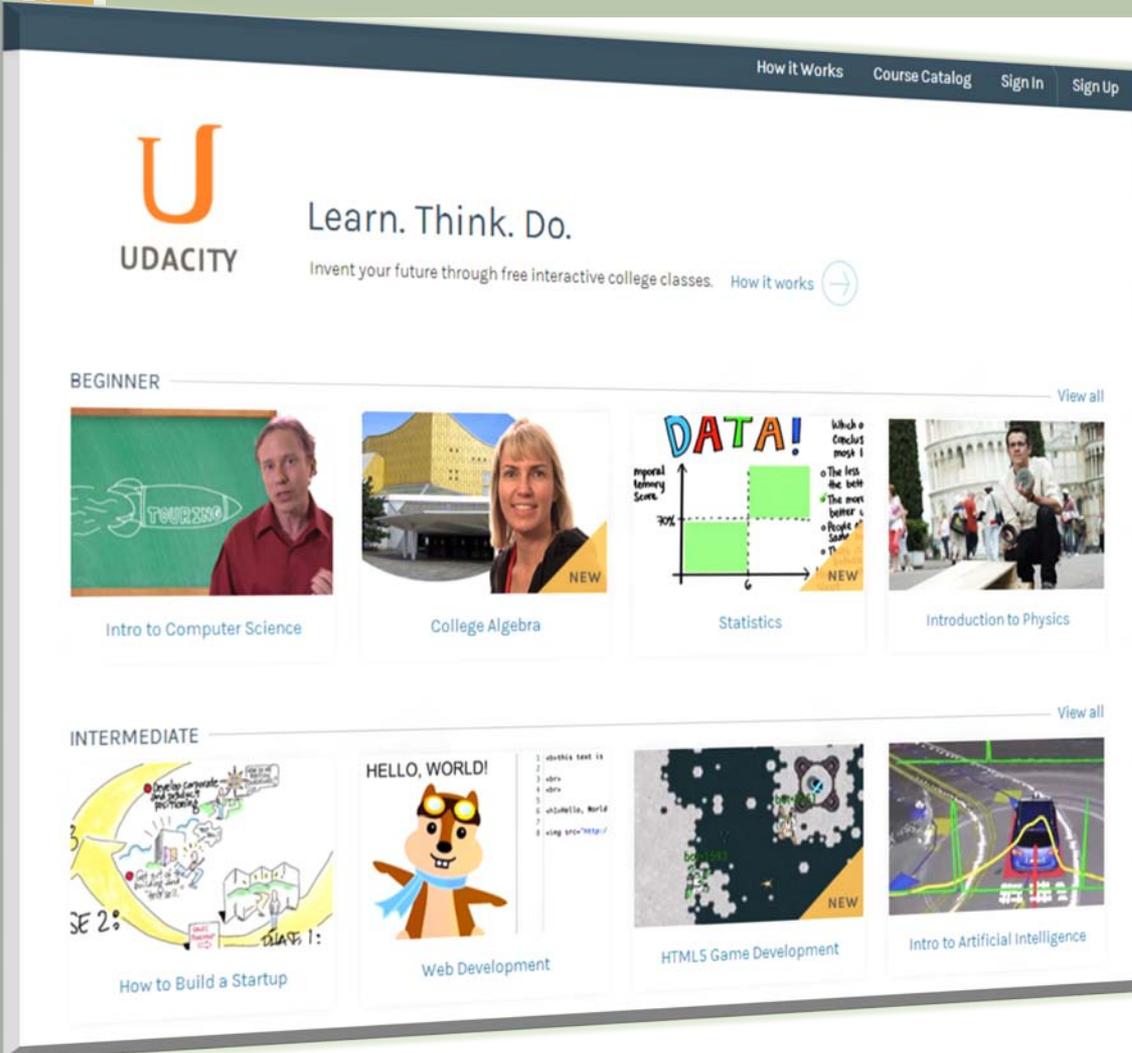
Founded by two Stanford professors

Run by MIT, Harvard and Berkeley

Founded by a Stanford professor

UDACITY

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2012 г.

Кол-во участников: >> 100 000

Кол-во курсов: 22

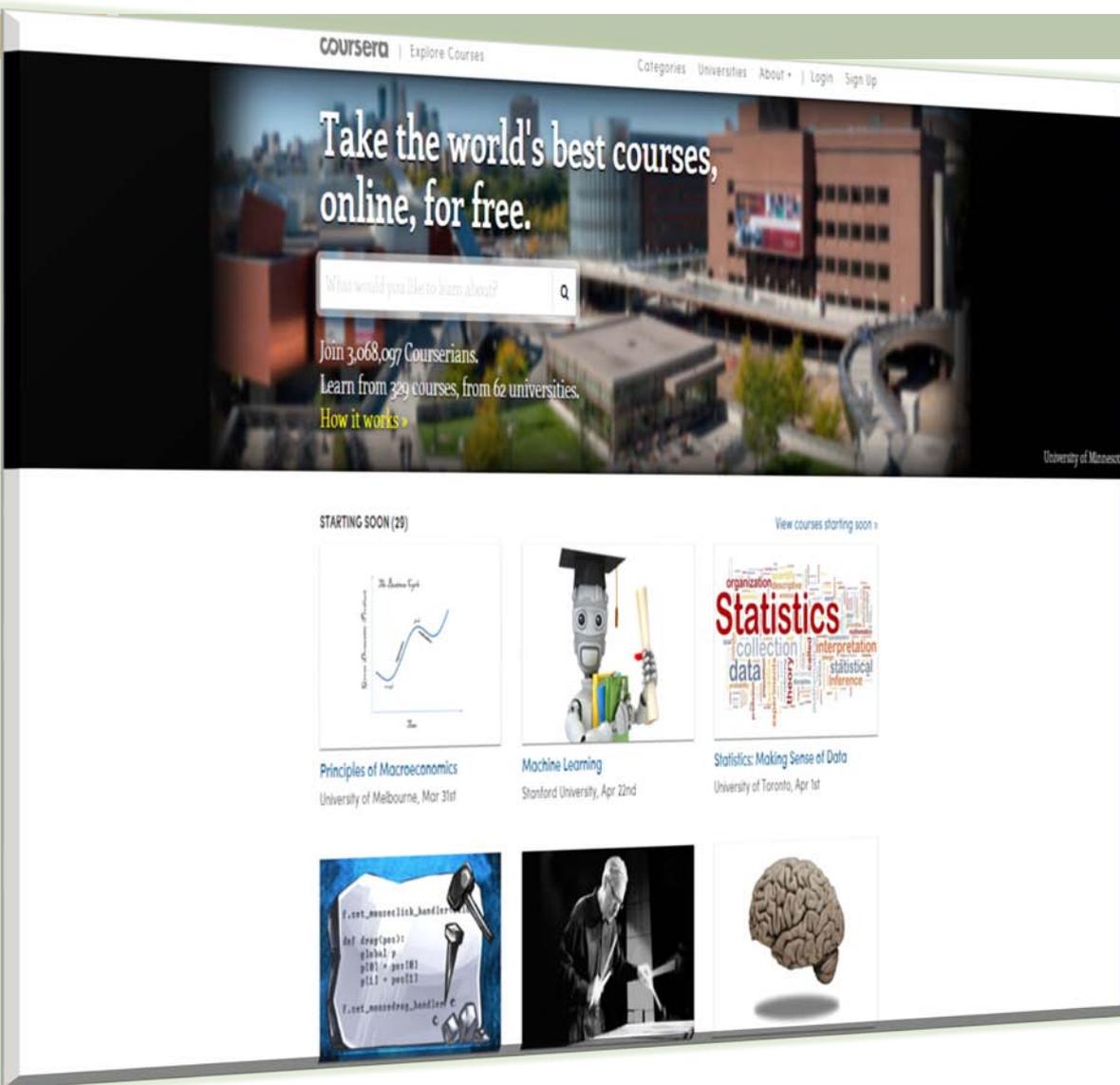
Кол-во направлений: 4

Кол-во университетов: до 10

Our mission is to bring accessible, affordable, engaging, and highly effective higher education to the world.

We believe that higher education is a basic human right, and we seek to empower our students to advance their education and careers.

COURSERA



2012 г.

**Кол-во участников:
3,068,172**

Кол-во курсов: 329

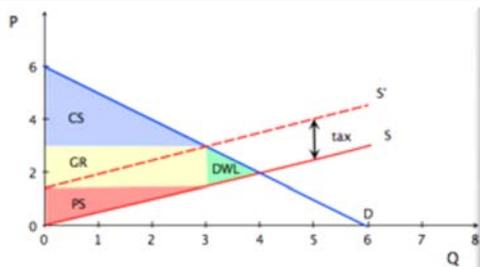
Кол-во направлений: 24

Кол-во университетов: 62

We hope to give everyone access to the world-class education that has so far been available only to a select few. We want to empower people with education that will improve their lives, the lives of their families, and the communities they live in.

COURSERA

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Principles of Microeconomics
University of Pennsylvania, Apr 8th

- Arts
- Biology & Life Sciences
- Business & Management
- Chemistry
- Computer Science: Artificial Intelligence
- Computer Science: Software Engineering
- Computer Science: Systems & Security
- Computer Science: Theory
- Economics & Finance
- Education
- Energy & Earth Sciences
- Engineering

- Food and Nutrition
- Health & Society
- Humanities
- Information, Technology & Design
- Law
- Mathematics
- Medicine
- Music, Film, and Audio
- Physical & Earth Sciences
- Physics
- Social Sciences
- Statistics and Data Analysis



Write Like Mozart: An Introduction to
Classical Music Composition
National University of Singapore, Jan 14



Content Strategy for Professionals:
Engaging Audiences for Your Organiz...
Northwestern University, TBA



Synapses, Neurons and Brains
Hebrew University of Jerusalem, Mar 31st



2012 г.

Кол-во участников: >> 500 000

Кол-во курсов: 26

Кол-во направлений: 4

Кол-во университетов: 12

**OUR MISSION IS TO
TRANSFORM LEARNING**

EDX: КАК ПРОХОДИТ ОБУЧЕНИЕ

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The screenshot displays the edX courseware interface. At the top, a navigation bar contains several tabs: Courseware, Course Info, Syllabus, Textbook & VM, Tutorials & Resources, Discussion, Wiki, and Progress. The 'Course Info' and 'Textbook & VM' tabs are circled in red. Below the navigation bar, the left sidebar shows a list of weeks: Overview, Week 1, Week 2, Week 3, Week 4, Week 5, and Week 6. The 'Week 1' tab is circled in red. The main content area for Week 1 is titled 'WEEK 1' and contains the text: 'You were most recently in Quiz 0. If you're done with that, choose another section on the left.' Below this text, there are three items listed: 'Lecture 1: Course Introduction', 'Lecture 2: Service Oriented Architecture and Cloud Computing', and 'Quiz 0 Diagnostic due October 7'. The 'Lecture 1' and 'Quiz 0' items are circled in red. At the bottom of the page, there is a footer with the edX logo, links for 'Find Courses', 'About', 'Blog', 'Jobs', and 'Contact', and social media icons for YouTube, Google+, Facebook, and Twitter. The footer also includes the text '© 2012 edX, some rights reserved.' and links for 'terms of service', 'privacy policy', 'honor code', and 'help'.

EDX: КАК ПРОХОДИТ ОБУЧЕНИЕ

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The screenshot displays the EDX course interface for BerkeleyX: CS169.1x Software as a Service. The top navigation bar includes 'Courseware', 'Course Info', 'Syllabus', 'Textbook & VM', 'Tutorials & Resources', 'Discussion', 'Wiki', and 'Progress'. The left sidebar shows a course outline with 'Overview', 'Week 1', 'Week 2', 'Week 3', 'Week 4', 'Week 5', and 'Week 6'. Under 'Week 1', the following items are listed: 'Lecture 1: Course Introduction', 'Lecture 2: Service Oriented Architecture and Cloud Computing', and 'Quiz 0 Diagnostic due October 7'. The main content area features a video player for 'L1V1: ENGINEERING SOFTWARE IS DIFFERENT FROM ENGINEERING HARDWARE!'. The video player shows a man in a striped shirt standing in a lecture hall. The video progress bar is at 0:00 / 8:03, with the time '8:03' circled in red. Below the video player, there is a 'Download video here.' link. To the right of the video player, there is a transcript of the lecture. The transcript starts with 'David Patterson: So the goals are to really learn software engineering.' and continues with 'So, harking back to my student days, I've always been kind of amazed at how bad software engineering is taught at the universities. Because back when I was doing it, you were supposed to have 100 people working for five years to build software, in a complete mismatch of what you're...'. At the bottom of the page, there is a 'Show Discussion' link and a 'New Post' button.

edX BerkeleyX: CS169.1x Software as a Service vetmar

Courseware Course Info Syllabus Textbook & VM Tutorials & Resources Discussion Wiki Progress

Overview

Week 1

Lecture 1: Course Introduction

Lecture 2: Service Oriented Architecture and Cloud Computing

Quiz 0 Diagnostic due October 7

Week 2

Week 3

Week 4

Week 5

Week 6

L1V1: ENGINEERING SOFTWARE IS DIFFERENT FROM ENGINEERING HARDWARE!

David Patterson: So the goals are to really learn software engineering.

So, harking back to my student days, I've always been kind of amazed at how bad software engineering is taught at the universities.

Because back when I was doing it, you were supposed to have 100 people working for five years to build software, in a complete mismatch of what you're...

Download video [here](#).

Show Discussion New Post

EDX: КАК ПРОХОДИТ ОБУЧЕНИЕ

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The screenshot shows a course navigation sidebar on the left with the following items: Overview, Week 1, Lecture 1: Course Introduction, Lecture 2: Service Oriented Architecture and Cloud Computing, Quiz 0 (circled in red), Week 2, Week 3, Week 4, Week 5, and Week 6. The main content area is titled 'QUIZ 0 DIRECTIONS' and contains the following text: 'This is the first quiz for the course. It will test your knowledge of' followed by a bulleted list: 'course prerequisites', 'the first week of lectures, and', and 'knowledge of the course policies.' Below this is a paragraph: 'At the bottom of this page is a single "Check" button that will grade your answers for all of the questions. While you have unlimited submissions for this quiz, we encourage you to try to figure out the answers to the problems rather than brute-forcing all possibilities.' A red circle highlights the text 'QUIZ 0' in the main content area. Below that is the heading 'QUESTION 1:' followed by the text: 'Class `Customer` has a subclass `VIPCustomer`. Assuming a well written program, which of the following statements are true? (More than one may be true.)' A list of four options follows, with a green checkmark to the left of the first option: 'Any method that takes an instance of `VIPCustomer` can safely be passed an instance of `Customer`.' The other options are: 'Any method that takes an instance of `Customer` can safely be passed an instance of `VIPCustomer`.', 'The set of instance variables of a `VIPCustomer` must be the same as the set of instance variables of a `Customer`.', and 'If you call a nonexistent method on a `VIPCustomer`, the call will still work if `Customer` implements that method.'

EDX: КАК ПРОХОДИТ ОБУЧЕНИЕ

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edX | BerkeleyX: CS169.1x Software as a Service vetmar

Courseware Course Info Syllabus **Textbook & VM** Tutorials & Resources Discussion Wiki Progress

Textbook & Virtual Machine (VM) Instructions

RECOMMENDED TEXTBOOK

The recommended textbook for the class is [Engineering Long-Lasting Software \(ELLS\)](#), Beta edition (0.9.0), by Fox and Patterson. While the book is recommended, it is not required, and there are many [instructional materials available online for free](#).

Please note that the price and availability may vary based on the country that you live in. For more information on this issue, visit the [textbook FAQ](#).

- E-book (\$10)
 - [Kindle format](#)
 - [Apple iBook format](#)
 - [Nook format](#)
- Print book (\$20)

VIRTUAL MACHINE (VM)

To do your homework, it is recommended that you use a virtual machine. There are three options for setting up a virtual machine: (1) running the virtual machine locally (2) running the virtual machine from the cloud or (3) doing a bare-bones installation.

We will be assessing your code on VirtualBox, so we recommend the local option.

- **Local VM (recommended):** The instructions for downloading and setting up VirtualBox are in the [wiki](#). This is by far the easiest option.
- **Cloud VM (less recommended):** If running a virtual machine on your computer is prohibitively slow, it may be worthwhile to work from the cloud. To do so, you will need to sign up with Amazon Web Services Free Tier, and use Elastic Cloud Computing (EC2) and Simple Storage

EDX: ОРГАНИЗАЦИЯ ОБУЧЕНИЯ

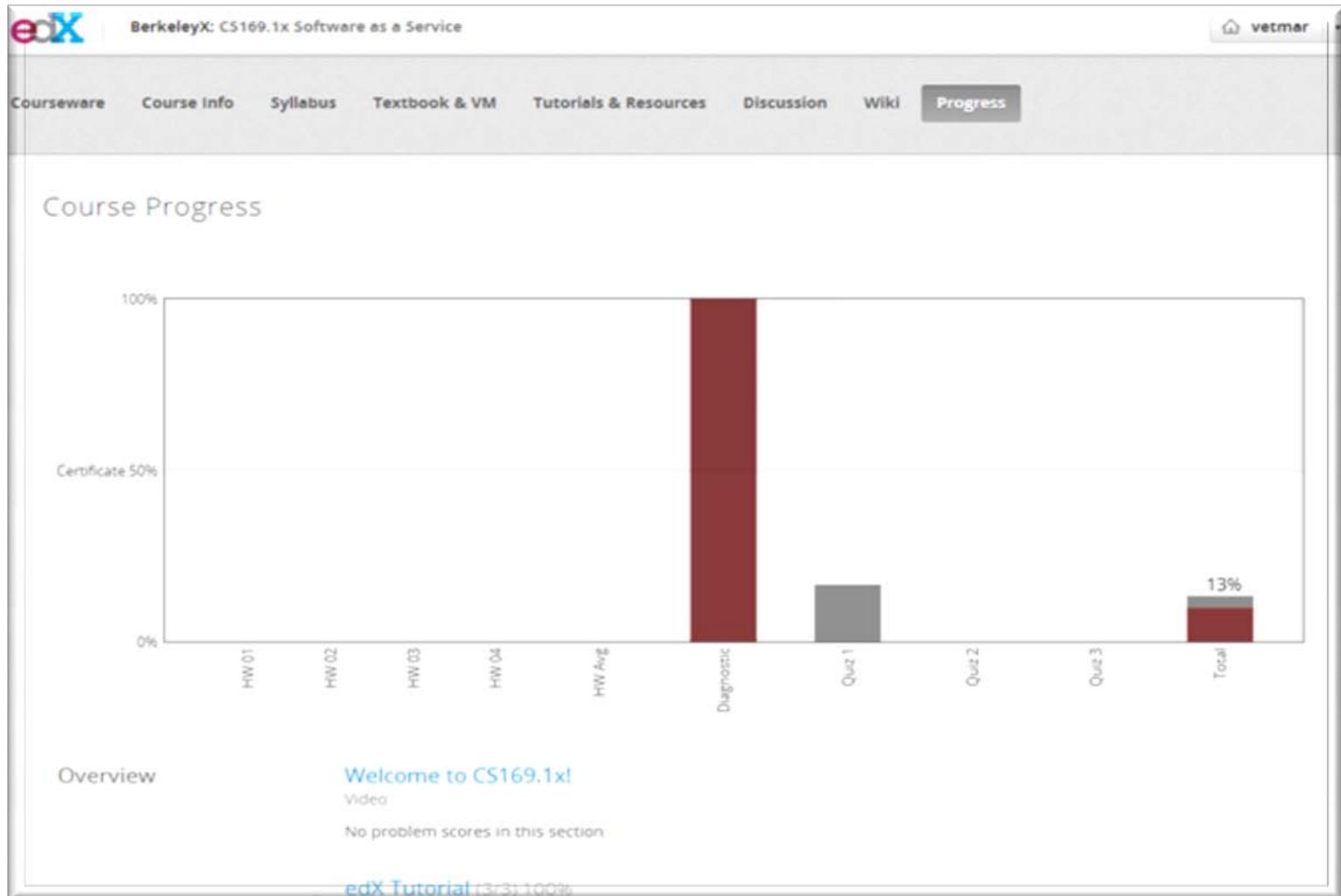
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The screenshot shows a Google+ interface. On the left is a sidebar with a list of discussions, each with a title, a vote count (e.g., +0, -1, +5), and a comment count (e.g., 0, 2, 1). The top discussion is 'Continuing the discussion' with 0 votes and 0 comments. Below it are 'happy new year 2013' (-1, 2), 'Testing your privates' (+0, 1), 'Anybody from Brazil? - class project' (+0, 2), 'How to receive feedback from the autograder? No "check" button for HW 2?' (+5, 2), 'certifivate regeneration' (+0, 0), 'Thank you Armando Fox' (+2, 2), 'Just started: Nov 19th' (+0, 1), 'Strange cucumber error after virtual maching crashing' (+0, 6), 'sort method' (+0, 1), 'You have already activated rake 10.0.1, but your Gemfile requires rake 0.9.2.2.' (+1, 3), 'AutograderSubprocess error: *** FATAL: cucumber results' (+0, 1), 'Database: Locked (and not just because time is up)' (+0, 0), 'Thin controller and view' (+0, 0), and 'Autograder Availability' (+0, 3).

The main content area shows a post by **hnarayanan** titled 'Continuing the discussion', posted 'about 18 hours ago'. The post text reads: 'Now that the class is complete, I have set up a Google+ community to continue talking about SaaS, software engineering and future projects. Please join us if you're interested!' followed by the URL <https://plus.google.com/communities/106760806784750201645>. Below the post is a 'Post a response:' section with a rich text editor toolbar (bold, italic, link, quote, image, list, link, video, embed) and a large text input area. A 'Submit' button is located at the bottom of the response area.

EDX: КАК ПРОХОДИТ ОБУЧЕНИЕ

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БЫТЬ В КУРСЕ

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 www.class-central.com



Class Central search for courses

Class Central is a free online course aka MOOC aggregator from top universities like Stanford, MIT, Harvard, etc. offered via Coursera, Udacity, edX, Canvas Network, & others [Learn More](#)

Recently started or starting soon (54) Just Announced (43) Courses in Progress (117) Future courses (287) Self Paced (29) Finished courses (135)

Get the latest updates

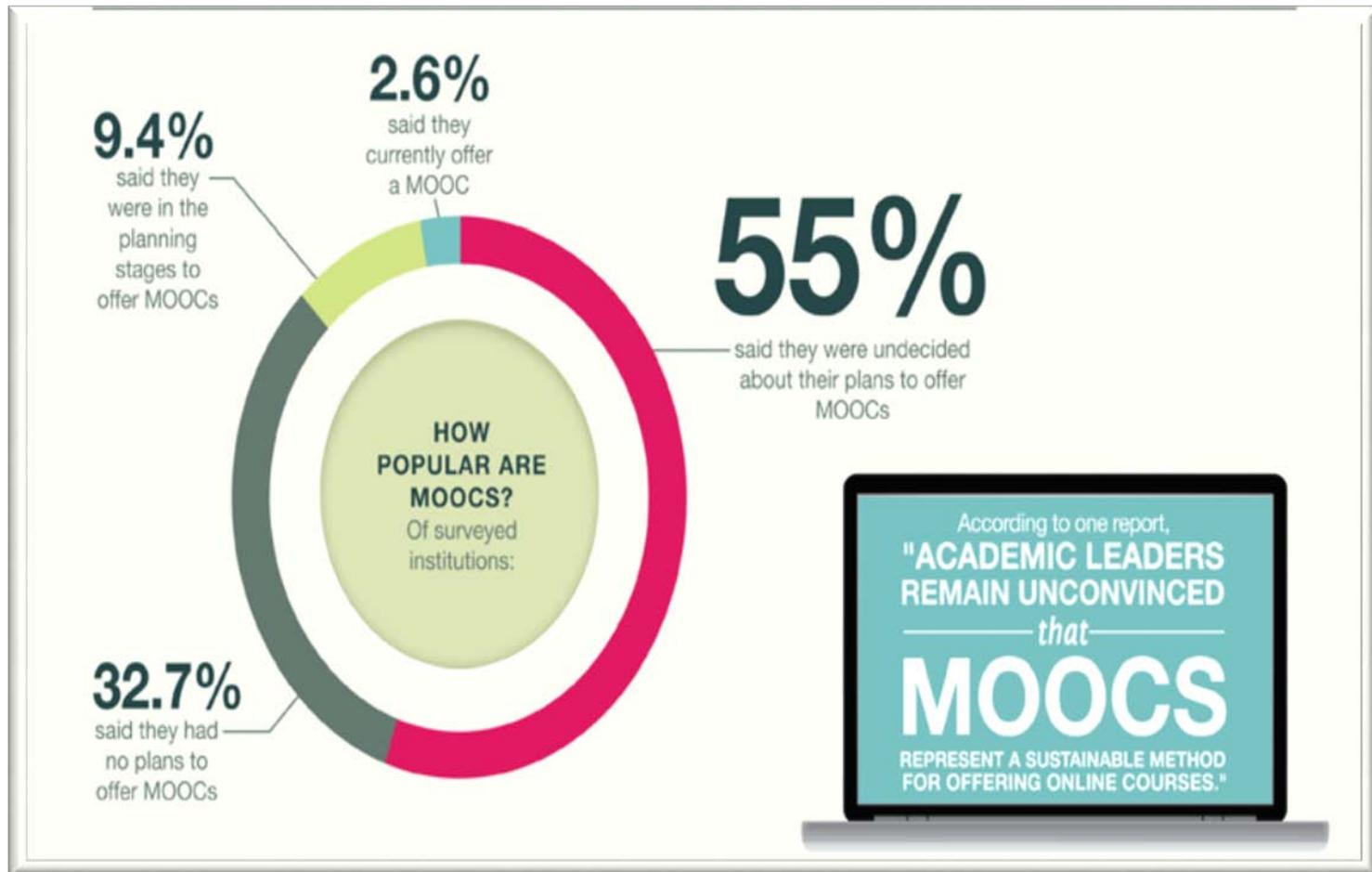
New database course from openHPI in German starting April 8th: Data Management with SQL

Google to fund Cornell MOOC - Six Pretty Good Books: Explorations in Social Science



НОВЫЕ ВОЗМОЖНОСТИ – НОВЫЕ ПРОБЛЕМЫ

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НОВЫЕ ВОЗМОЖНОСТИ – НОВЫЕ ПРОБЛЕМЫ

MASSIVE

Taking a course with hundreds, if not thousands of other students presents many challenges:

-  MOOCs cannot provide the same intimate experience as a traditional classroom.
-  Students may feel the need to break up into smaller learning groups to better grasp information.
-  Students may not get to know their professors well, let alone have access to them, and vice versa.
-  MOOCs can spread too much of the same thinking, which can limit the diversity of thought.

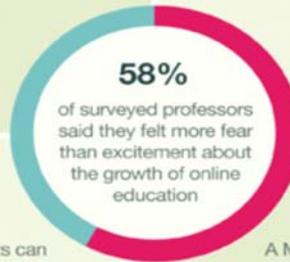
OPEN

While many call MOOCs' open quality a strength, it does create complications:

-  The students that MOOCs target are often the ones who need face-to-face instruction the most.
-  Few students who sign up for courses actually complete them. Even popular courses have low completion rates:

MITx's Circuits and Electronics

154,763 registered, 7,157 completed the course



ONLINE

While learning online may mean that students can learn anywhere at anytime, it does have its drawbacks:

-  MOOCs may be a poor option for students who struggle with motivation, as students need to become responsible for their own learning.
-  Technical difficulties with a participant's computer or Internet connection can impede learning.
-  MOOCs cannot be set up as traditional courses online; they need to have a unique course structure.
-  Academic dishonesty can become an issue. In August 2012, students taking Coursera classes discovered and reported dozens of plagiarism incidents via peer grading.

COURSES

A MOOC's characteristics (massive, open, online) can naturally impact the course in several ways, including:

-  MOOCs are considerably more hands-off than courses that involve off-the-cuff discussions and constant interaction.
-  Some question courses' pass/fail standards, if credit should be assigned, and how degrees will be rewarded.
-  Some have raised quality concerns, as there is no universal standard MOOCs must meet.
-  Some MOOCs require peer feedback and grading, which can be unreliable and unhelpful.

ВОПРОСОВ БОЛЬШЕ ЧЕМ ОТВЕТОВ



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▪ **хМООС – революция в высшем образовании, начало конца для традиционного высшего образования?**

▪ **Для чего хМООС нужны университетам?**

– **Повышение репутации? Продвижение? Желание всех обучить?**

▪ **Какова эффективность онлайн обучения и сравнимы ли результаты онлайн обучения с результатами очного обучения?**

▪ **Какова роль преподавателя в учебном процессе и какими компетенциями должны обладать онлайн преподаватели?**

▪ **Какими должны быть современные учебные материалы?**

▪ **Сравнимы ли временные затраты при очном обучении и при обучении онлайн?**

Будут ли учитываться ли результаты в учебном плане и как перейти на кредитную систему?

Кто это финансирует и когда наступит наша очередь платить?

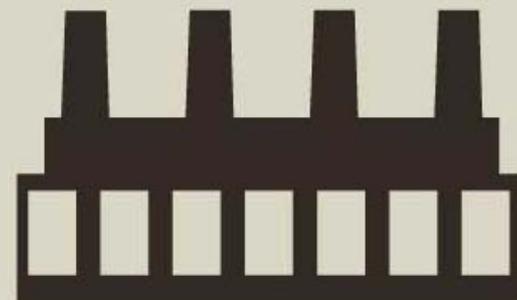
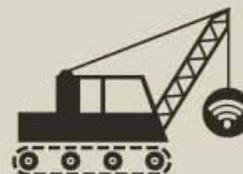
А ПЕРСПЕКТИВЫ?

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Традиционное обучение

Обучение онлайн



Технологии онлайн обучения – разрушительная сила, которая изменит структуру высшего образования

Спасибо за внимание!

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