

World Academy Forum on  
The Future of Global Higher Education  
Berkeley, CA



**5A: Higher  
Education  
Trends**

Lynne O'Brien  
Associate Vice Provost for Digital and Online Education Initiatives  
Duke University ~ Oct. 2, 2013

# Educational trends



- Lifelong
- Global
- Social
- Personalized
- Open

# Who takes quantitative bioelectricity for no credit?

...a final year medical student from Brazil...  
here to brush up on some of the  
Biophysics

...in Maryland, doing research cardiac  
bioelectricity. I took a similar course  
during grad school but when I saw that  
the course is offered by Dr. Barr,  
pioneer of the field, I wanted to hear  
about it from the master himself.

...from China, now a bio med  
engineering undergrad at Boston  
University

...from Colorado. I have been in  
nursing for 20 years now and have  
a great interest in bio-electricity as  
it relates to the cardiac muscle

...finishing high school.  
Biology has always fascinated  
me so I'm choosing my future  
studies through Coursera,  
bioelectricity might be the one  
to go for :)

...a vet from Spain interested in  
neurobiology

...a freelance Technical writer for  
healthcare, communications, customer  
service, and business

...an electrophysiologist and a full-  
time working mother with a young  
baby, so I don't expect to be  
competitive but to enjoy whatever I  
can learn

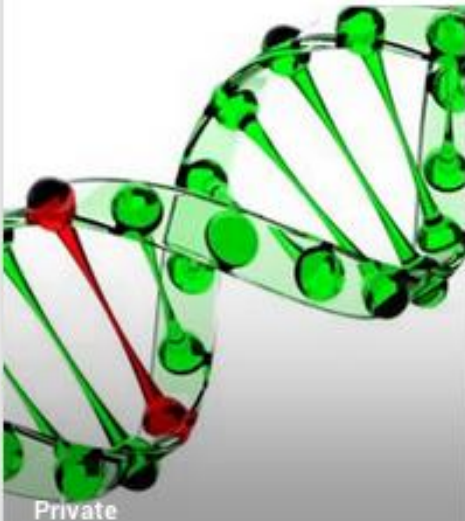
# Social - online

Google+



Communities ▾

Nooristas – The Genetics Gang



Private



Introduction to Astronomy (Duke Univ... 🔒

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Write something...

RECENT POSTS



**Osita Annie**

"This is big; it's really impressive – the first human-made object to make it out into interstellar space,"#voyager! Amazing!



Like · Comment · Follow Post · September 12 at 5:18pm via mobile



**Praveen Kumar** updated the group tags to Coursera, Duke University, Astronomy.

Like · Comment · Follow Post · August 27 at 8:51am



Tine Pérez likes this.



Write a comment...



# Social – in person

## San Francisco Coursera Community

### San Francisco, CA


Founded June 22, 2012

Meetups 3

Courserians 259



## Bioelectricity Bay Area study group

 Wednesday, October 3, 2012, 7:30 PM  
SELECTED BY: ALEX

 Cafe La Boheme  
San Francisco, CA ([map](#))  
SELECTED BY: ALEX

Let' meet up and talk some bioelectricity - review the material, catch up on the class, help each other out, or just shoot the breeze about cool biotech stuff.

The location is BARTable but for future meetups we can change it depending on where everyone's coming from.

Kavya Bharti · 2 months ago

## (Community TAs: Duke Human Physiology)

Hello everyone of my fellow TA's!

After Introductory Human Physiology, whenever I hear "greetings", I hear it in her voice! :)

Well, a bit about myself then. I'm from India. I've done Masters in Biotechnology. I used to teach Biotech Engg. undergraduates. I'm a MOOC beginner.

I'm excited by online education! It's so rich in quality, content and discussions, flexible yet goal-oriented.

Coursera has made me more knowledgeable, which wouldn't have been possible earlier. The idea of interacting with people from all over the world from different cultures is fascinating!

Ok, enough about myself and my exclamations!

Jennifer, Rita, Nabanita, Hwa-Tung, Kelvin, Herman, Jamila, (Emma) Amanda, and Jackie- where are you? Hello! :)

↑ 3 ↓ · flag



Hwa-Tung Ong · 2 months ago



Thanks for the greetings, Kavya. Like you, I've really enjoyed doing the free courses on Coursera. So hopefully by being a TA I can contribute something back to help others. I live in Brisbane, Australia. My educational background is in electrical engineering. I did a PhD in it and worked for several years as a research scientist but am no longer in this field. Currently, I'm studying whatever takes my fancy, and participating in Coursera courses is one of the ways I do this. Greetings fellow padawans (oops wrong universe).

↑ 2 ↓ · flag

# Personalized

July 11, 2013

Accreditor Approves Competency-Based Degree at U. of Wisconsin

## UMUC creates pathway to earn credit through MOOCs

*Posted: Jul 31, 2013 2:49 PM EDT*

*Updated: Jul 31, 2013 2:49 PM EDT*

By BRIAN WITTE  
Associated Press

Duke Astronomy  
MOOC student with  
end of course  
certificate



# Open

- Expanded access
- Creation and use of open content
- Visible teaching

*I'm certain I would be denied access to this course if it there were a long list of pre-requisites. It takes vision to open a topic like this to a wider audience and I feel grateful ...*

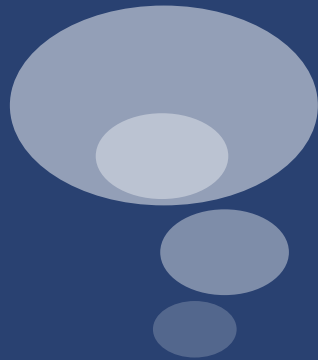
*Having spent the last few years teaching introductory courses at a university, I have been awestruck by the extraordinary size and organization of this course. I take my hat off to you, Roger Coke Barr, for doing this and doing it so well.*





Thank you!

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**9: Online  
education as a  
driver of  
innovation and  
opportunity**

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- Scale → Access
- Big data → Individualization
- Rapid iteration → Rapid improvement
- Online ← → Campus

# Scale → expanded access

## Participation in Duke MOOCs 2012-13

**13** course sessions

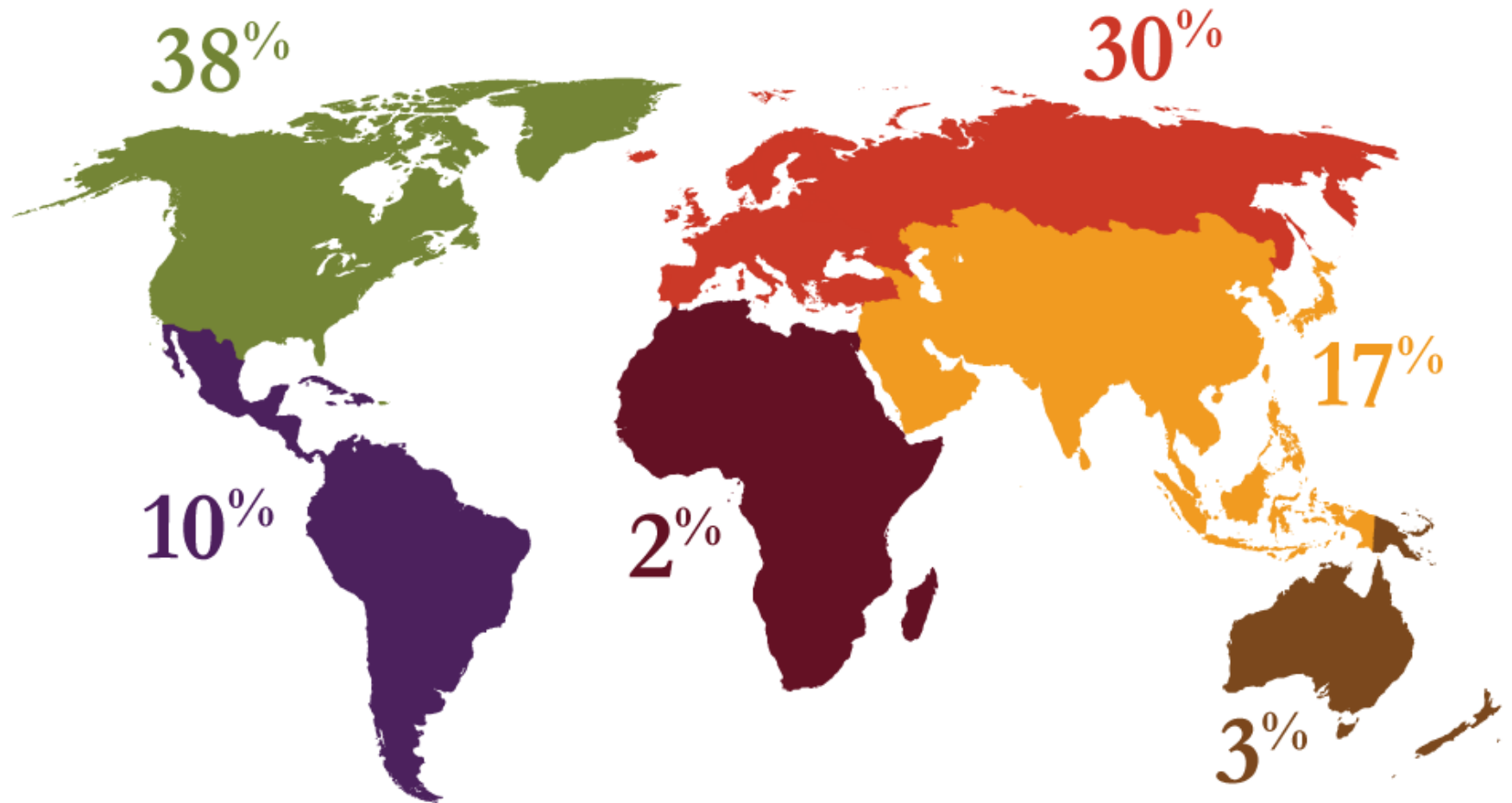
**566,000** individual students

**9,700,000** video downloads / streams

**300,000** forum posts / comments

**25,000** statements of accomplishment

# Duke MOOC students by geographic region



*Figure based on 131,061 survey responses 2012–13*

Chinese enrollment likely to grow in 2013-14 through Chinese internet provider.

# Big data → Individualization

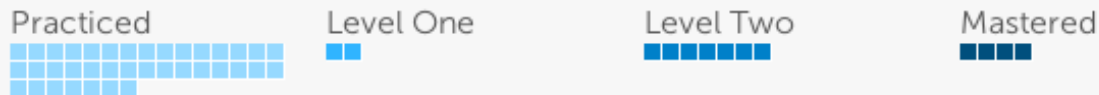
## Math Pretest

Don't worry if you don't know some answers. Everything you get right is a b...

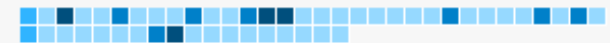
### Your Pre-Test Results Are In!

Your 52 Skills, Grouped by Estimated Familiarity.

less familiar → more familiar → most familiar



52 Skills Earned



Representing numbers

You Earned  
PRACTICED

Yay! Based on your assessment, we've filled some skills in your progress bar that we think you're familiar with.

### BADGES EARNED



Math Pretest Champion

You finished the math pretest in the learning dashboard. Good work!

(Khan Academy student dashboard)

# Rapid iteration → Rapid improvement



- 2012-13: 11 new MOOC courses + 2 repeats in 11 months
- Spring 2013: 10 new courses w/ additional formats and teaching approaches
- Fall 2013: CFP for new online course & curriculum models
- Faster cycles of experimentation, assessment, improvement

# Online and in-person courses each drive innovation in the other

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## Students Say Online Courses Enrich On-Campus Learning

One in five science students surveyed by *Nature* and *Scientific American* has participated in a MOOC—and most would do so again

By Jeffrey Barcholet



# Online ← → Campus

- Flipped classroom
- Flexible class meetings, varied course length
- External participants, global perspectives in campus classes
- MOOCs for prep or advanced work
- Continuing ed
- Modular content for reuse
- Extend curriculum
- Connect w/alumni
- Share development and teaching of courses
- Big data to shape teaching, understand learning
- Curricular change as students bring online experience to campus and vice versa

Thank you !





# 2013-14 New Duke MOOCs: additional schools and subjects (plus repeat offerings of most of last year's MOOC courses)

Faculty :	Primary Department	Course:
David Boyd	Duke Global Health Inst.	The Challenge of Global Health
Dorian Canelas	Chemistry	Introduction to Chemistry
Mine Çetinkaya-Rundel	Statistics	Data Analysis and Statistical Inference
Cathy Davidson	English	History and Future of Higher Education
Nita Farahany	Law	Genes, Brains, & Law
Jennifer Groh	Psychology & Neuroscience	The Brain and Space
Laurence Helfer	Law	International Human Rights Law
Bruce Jentleson	Public Policy	American Foreign Policy in the 21 <sup>st</sup> Century
Dave Johnston	Marine Sci. &	Marine Megafauna: Intro. To Marine