

# UNIVERSITY OF ILLINOIS

AT URBANA-CHAMPAIGN

## The Place of Coursera in our Overall Campus E-learning Plan



[illinois.edu](http://illinois.edu)

# When “E-learning” becomes “learning”

- UIC survey
  - What students want
  - Perceptions of faculty
- Mainstream technology into all teaching/learning
  - Not just “distance ed”
  - Fully online and blended: spectrum



## Reasons for more online options

- Access to online: cost and time to completion
- Students are already taking online courses from elsewhere
- Developing online courses leads to incorporating new approaches into all teaching
- Online teaching can *improve* instruction, promote innovation
- Not primarily about revenue, but about innovation and new pathways to excellence



# Innovation and excellence

- New kinds of lectures and lecture delivery
- New forms of T/S and S/S interaction (inside and outside of class)
- Creating a “small class” feel in a “large class” setting
- Incorporating new modes of inquiry/investigation into class
- New kinds of student projects



## Innovation and excellence (cont'd)

- New forms of evaluating teaching and learning
- Researching what we do



# A transformed teaching/learning environment

- Home of Plato
- Campus presence/identity
- National/international visibility as an online provider
- How Coursera is helping
- But:
  - MOOCs only one model
  - Can't drive campus agenda
  - Division of effort/resources



# Illinois-Coursera Partnership



 ILLINOIS

# What is Coursera?

- Coursera is a MOOC platform provider
- MOOC=Massive Open Online Course
  - Massive = enrollments of 10,000–100,000
  - Open = anybody can take the course
  - Online = use internet technology to deliver



Ng & Koller

startup

←\$16M VC



Coursera

www.coursera.com



STANFORD  
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University partners





# What does a Coursera Course Look Like?

- Short videos with embedded assessments
  - tools for editing/creating embedded assessments

The screenshot shows the 'Editing Quiz: Bayesian Network Fundamentals' interface. The top navigation bar includes 'Stanford University Probabilistic Graphical Models' and 'Daphne Koller Professor of Computer Science'. The main content area is divided into several sections:

- Question 1**: Includes 'Variation 1' with a 'Factor product' question type and 'Variation 2' with a 'Factor product' question type.
- Question 2**: Includes 'Variation 1' with a 'Factor reduction' question type and 'Variation 2' with a 'Factor reduction' question type.
- Question 3**: Includes 'Variation 1' with a 'Properties of independent variables' question type.

The 'Variation 1' section for Question 2 features a Bayesian Network diagram with 'Flu' as the root node and 'Fever', 'Fatigue', 'Cough', 'Headache', 'Muscle Aches', and 'Sore Throat' as child nodes. Below the diagram, there is a text box for the question and an 'Explanation' section with a table of scores:

Selected Score	Unselected Score	DN
1	0	0

The explanation text includes the calculation:  $P(\text{Headache} = 1, \text{Fever} = 1) = P(\text{Flu} = 1) \cdot P(\text{Fever} = 1 | \text{Flu} = 1) = 0.5 \cdot 0.5 = 0.25$ .



# How Does a Class with Tens of Thousands of Students Work?

- ~~5,000 TAs?~~
- Sophisticated tools for auto-grading
- Volunteer peer grading
  - Final score, average of 6-7 grades
- Online communities/discussion forums for student interaction
- Social media for group learning



# How Does Coursera Work?

- Coursera does NOT own the content, the “IP”
- Courses are free to view, but monetize related services
- Coursera runs everything about the course for us



# Challenges

- Accessibility – “Accommodate-First” rule
  - Closed captions (verbatim transcription)
  - Audio descriptions
- Copyright
  - Exceed fair use doctrine
  - As a large and visible company, Coursera in better position to negotiate with copyright holders



# 10 Illinois Coursera Courses

▪ Hetero Parallel Programming	12,471
▪ Android Apps	22,223
▪ VLSI CAD	5,560
▪ Microeconomics	17,966
▪ Intro Org Chem - Part 1	6,734
▪ Intro Org Chem - Part 2	3,463
▪ Intermediate Org Chem - Part 1	3,439
▪ Intermediate Org Chem - Part 2	2,600
▪ Planet Earth	9,601



# First Illinois-Coursera Course

- Introduction to Sustainability 32,241
  - Launched Aug 27

**TOTAL ENROLLMENT > 116,000 !!**



# Illinois Coursera Courses

- Not the same as our face-to-face and regular online courses
- Minimal instructor-student interaction
- Not for credit
- Short 6-8 week courses



# Introduction to Sustainability





# Where Do Our Coursera Students Live?



# Who Are Our Coursera Students?

**"I am a native Haitian ... I am taking this class to help me better understand... what has happened to my country and to acquire knowledge and practical tools to have a greater impact....."**

**"Hey, My name's Nicole.... I have a genetic disorder that makes all of my joints dislocate from the smallest movement ... I'm taking this class because I find it interesting and I'm trying to figure out if I can handle going back to school by taking online classes."**

**"I'm a physician, with a MSc in Occupational Health. ....my most recent concerns are linked to the interactions between health and environment...."**



# Who Are Our Coursera Students?

**"I've worked in the sustainable energy field for almost 15 years .....I registered for this course as I want to get back into the academic side of all the other aspects of sustainability..."**

**"I am entering my fifth year as a middle school teacher. I am looking ....to expand my depth of knowledge in the area of sustainability and the environment in order to help my students make broader connections between themselves and our ecosystems."**

**"I am a constant learner, .....now I am in retirement from the workforce (bloody cancer, now clear) need to keep learning and re establish brain connections after Chemo."**



# Who Are Our Coursera Students?

**"I am taking this course because I am worried. I am deeply concerned about issues around climate change and environment...I would like to hear something to give me hope. ....knowledge when I talk to other people."**

A Kenyan engineer trying to learn how to solve his country's electrical blackouts

A UN volunteer working in Bosnia-Herzegovina seeking help so he can educate others in the Balkans

A paralyzed woman who cannot pursue education except via online



# Who Are Our Coursera Students?

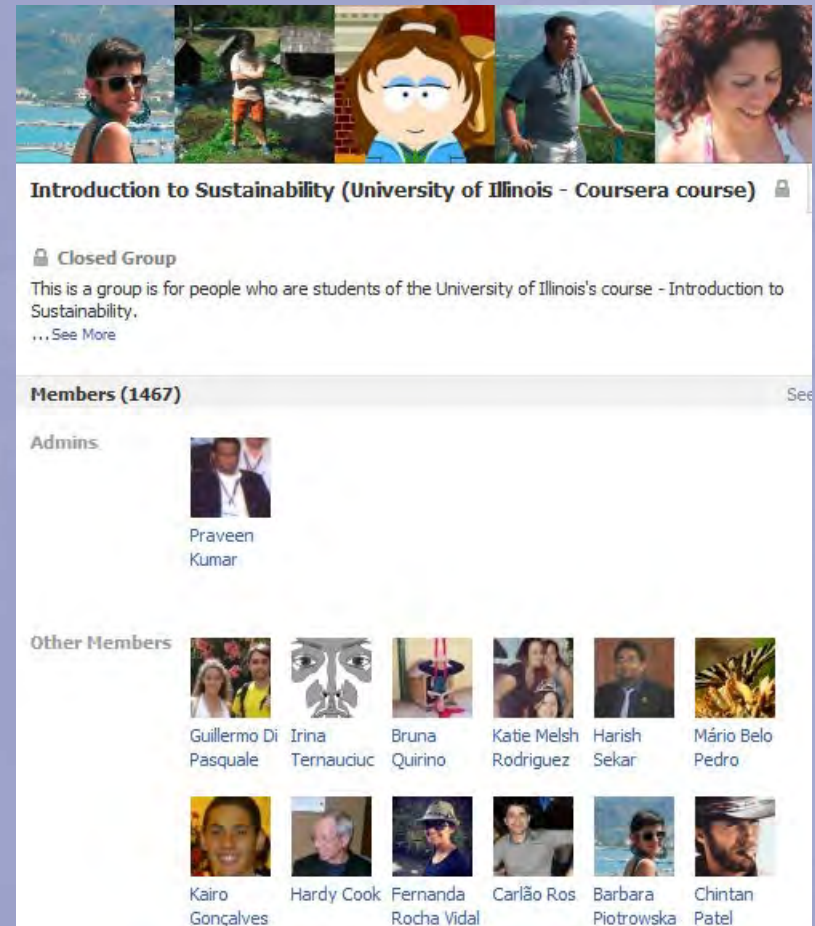
- People looking to further their careers
- Lifelong learners
- Concerned citizens
- People who have no other way to access courses
- People who want to learn so they can educate others (teachers)
- People who want to make an impact/solve problems
- People who want a global perspective
- High school students



# What Are They Doing?

- Connecting With One Another

Started their own Facebook group where they've introduced themselves and shared "hello" in at least 7 different languages



# What Are They Doing?

- Helping One Another
  - Generating a list of sustainability-themed books, blogs, etc. that students are compiling/discussing
  - Shared and solved problems (like the inability of some students to download the PDF version of the textbook... others found a different link that seems to work better)
- Providing lots of great feedback!



# Opportunities for Illinois

- Ability to:
  - Experiment with new modes of student interaction
  - Experiment with new ways to evaluate student performance
- Access to huge amounts of student data
  - Inform pedagogical practices
- Market our quality programs (“loss leaders”)
- Etc.





# Campus Process

- Coursera Initiative Implementation Committee
  - Compensation Models
  - Monetization Strategies
  - IP/Other Policies
  - Resources to support online education
  - **How does Coursera initiative relate to our broader campus e-learning agenda/vision**



# How will future courses be chosen?

- Coursera Courses Review Committee
  - List of criteria to evaluate courses for delivery through Coursera
  - Courses that represent full range of what we do as a campus



# Questions

