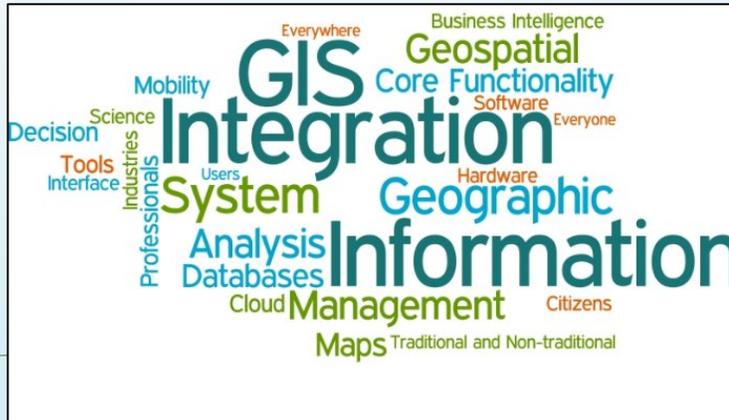


# Geospatial Open Courses: Outreach and Professional Development



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# How is Geospatial Technologies Being Introduced to the Masses?

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- Apps using location;
- Software (such as ArcGIS and Google Earth);
- The advent of unmanned aerial vehicles/devices (UAVs) or “drones” and
- MOOCs.



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*“The advent of Massive Open Online Courses (MOOCs); the growing and widespread implementation of online teaching at all levels of education...are combining to create the "perfect storm" preconditions for seismic shifts in our educational systems. These changes are already impacting geography, GIS, and geospatial education...”*

*D. Richardson, AAG  
Arc News, Summer 2014*



# What is a MOOC and Why Offer It?

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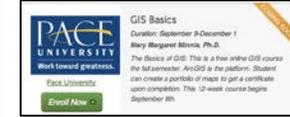
- A MOOC is a massively, open, online course aimed at unlimited participation and open access via the Internet and is free of charge.
- MOOCs have the potential to support thousands of learners through content and assessment mechanisms that can scale.
- MOOCs feature delivery methods and assessments that are built on the assumption that instructors alone cannot individually interact with each student and, therefore, *collaborative learning* is the central focal point of shared learning experiences.
- As a result, MOOCs require students to rely on each other for assistance, and MOOC instructors have comparatively fewer tools with which to shape their course experiences than would be common in online courses that enroll dozens rather than thousands of students



# History of Geospatially-Oriented MOOCs

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- ◆ Penn State joined Coursera in 2012 and offered “*Maps and the Geospatial Revolution*” in July 2013.
- ◆ Del Mar College and Texas A&M offered “*Geospatial Technology for STEMx Learning*” on HP’s Catalyst Academy in 2013
- ◆ “*Mapping with Google*” in 2013
- ◆ “*GIS Basics*”, Pace University, 2013
- ◆ “*Exploring Geographic Information Systems*”, Simon Fraser University, 2014
- ◆ “*Skills for the Digital Earth*”, Elmhurst College and the GeoTech Center, April 2014 via Open Courses (Desire2Learn) – ran from March 30-April 26, 2014 and March 2015.



# 2015 Geo-MOOCs

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1. ***Introduction to Geospatial Technology Using QGIS*** – Del Mar College - February 23 - March 29, 2015
2. ***Skills for the Digital Earth*** – Elmhurst College - March 1 -28, 2015
3. ***Going Places with Spatial Analysis*** – Esri - March 4 - April 15, 2015
4. ***Maps and the Geospatial Revolution*** - Penn State - March 25 - May 5, 2015
5. ***Introduction to GIS*** – Univ. of W. Florida - May 18 - June 29, 2015
6. ***Geo Design: Change Your World*** – Penn State - July 8 - August 18, 2015
7. ***Geospatial Intelligence and the Geospatial Revolution*** – Penn State - February 2015. The next session has not yet been scheduled.
8. ***From GPS and Google Maps to Spatial Computing*** – University of Minnesota - None scheduled as of today, but previous lectures can be previewed

# So Why Offer a MOOC?

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- Professional Development opportunities
- Learning as a service (LaaS): extending reach and access
- Marketing purposes for a new program or degree at a university (to build a brand)
- To increase potential revenues at colleges or universities by reducing costs of education
- Potential for CEUs or to be used for a certification

# Why MOOCs will Not Replace Higher Education Coursework and MOOCs Will Not Equate with Degrees

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- Most MOOCs offered today *aren't* meant as undergraduate course replacements;
- Most current MOOCs are offered primarily as educational outreach, and for marketing purposes;
- Many working professionals take these MOOCs as part of ongoing professional development;
- A study by the University of Pennsylvania in 2014 found that nearly 80% of the roughly 35,000 MOOC participants surveyed had a college degree already, and 44 percent had at least attended graduate school.
- Most MOOCs have a 85-90% dropout rate and are free of charge.
- Currently, there doesn't seem to be “buy-in” from participants that MOOCs are academically rigorous enough to “replace” traditional higher education coursework.

# Takeaways

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- MOOCs are useful for some professional development;
- MOOCs can be useful for marketing purposes or building a brand;
- Nearly 80% of MOOC participants already have a college degree and 44 percent had at least attended graduate school.
- Most MOOCs have a 85-90% dropout rate and are free of charge.
- Currently, there doesn't seem to be “buy-in” from participants that MOOCs are academically rigorous enough to “replace” traditional higher education coursework.
- MOOCs are currently NOT accredited or regulated in any way.

**PD   Outreach   Brand Building   Marketing ...but NOT degrees!**

# Acknowledgments

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