

# Teaching HGIS Online The Geospatial Historian

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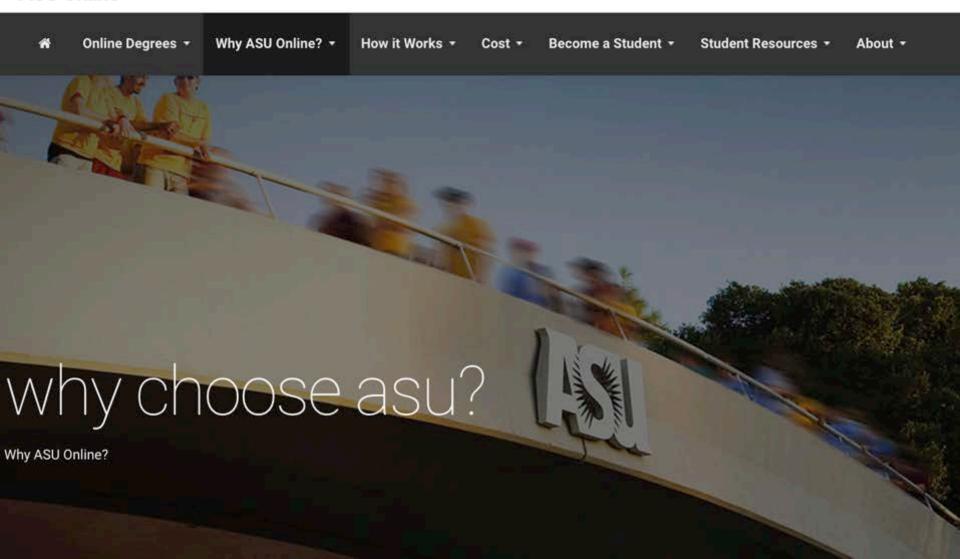
### **Teaching HGIS Online**

- History at ASU Online
- GIS for Environmental History (NiCHE & Geospatial Historian)
- New research in Canadian agriculture & environment



### **ASU Online**

#### **ASU Online**

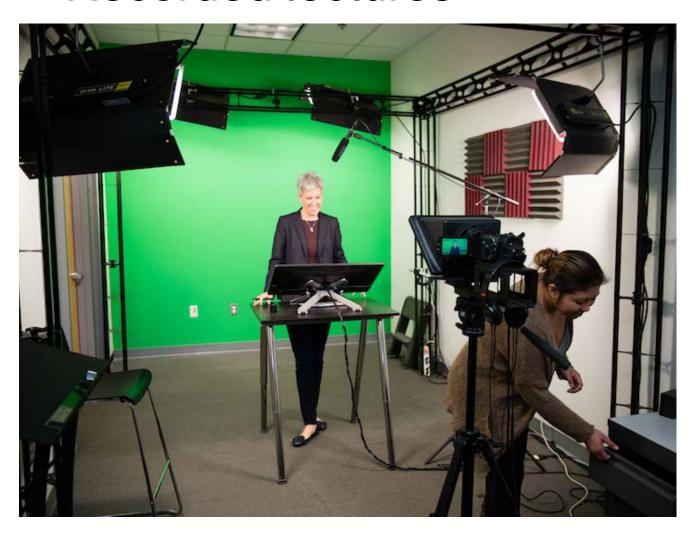


"It is clear that online instruction can be effective. In most meta-analyses of controlled studies comparing learning outcomes for online and face-to-face instruction, those who learn online fare as well as, and sometimes even better than, those experiencing the instruction in face-to-face format."

Barbara Means, et al, *Learning Online: What Research Tells Us About Whether, When and How* (Routledge, 2014)

### Video lectures

Recorded lectures



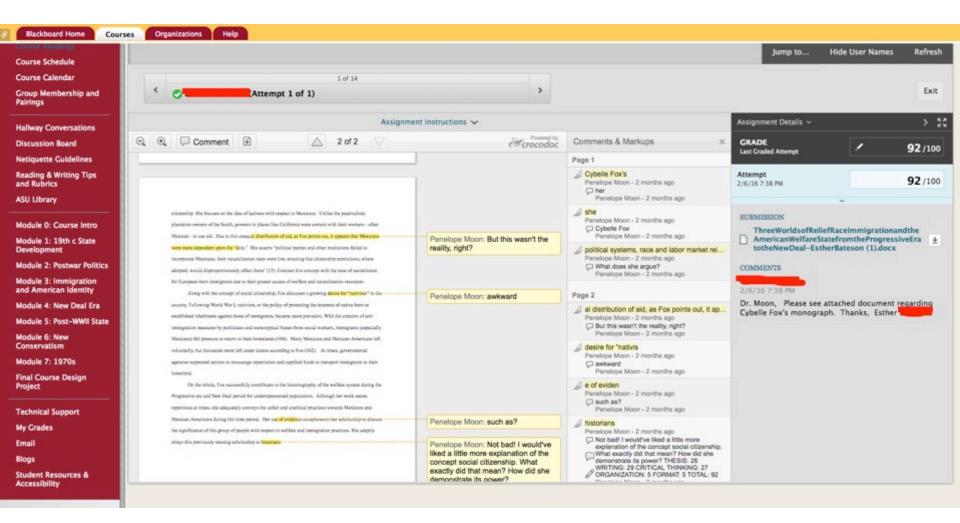
## Interactivity

Threaded discussions

## Interactivity



# Interactivity



### **ASU Online Students**

History MA Students	Online	Onground
% Non-traditional (>30)	72	23
% Female/ % Male	42/58	31/69
% First generation	29	23
% Nonwhite	15	8
% Working full-time	65	31
% Veteran	14	8

### Place history, on-the-spot





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#### **Geospatial Historian**

Open HGIS Lessons and Resources

ABOUT LESSONS BLOG PROJECT TEAM HGIS PROJECTS FINDING SPATIAL DATA



#### About

The Geospatial Historian is a tutorial-based open access textbook, modeled on the <u>Programming Historian</u>, for historical scholars and digital humanists. It is designed to teach practical digital mapping and GIS skills that are immediately useful to real research needs.



#### **Geospatial Historian**

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#### Lessons

What is Historical Geographic Information Systems (HGIS)?

HGIS is a historical methodology that uses Geographic Information Systems (GIS) database and mapping software to analysis spatial change over time. For



#### **Geospatial Historian**

Open HGIS Lessons and Resources

**ABOUT** 

LESSONS

**BLOG** 

PROJECT TEAM

**HGIS PROJECTS** 

FINDING SPATIAL DATA



Jim Clifford, University of Saskatchewan



Josh MacFadyen, Arizona State University



Daniel Macfarlane, Western Michigan University



Alan MacEachern



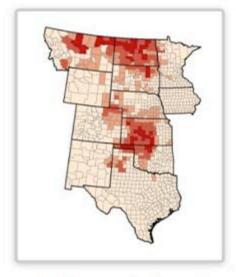
Bill Turkel



Adam Crymble

#### **Recent Contributors:**

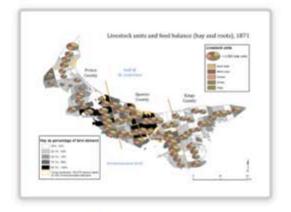
Geoff Cunfer, U Saskatchewan Anne Janhunen, U Saskatchewan Patrick Chassé, U Saskatchewan Matt Todd, U Saskatchewan Jessica DeWitt, U Saskatchewan



Great Plains Red Wheat Map



Georeferenced Historical Map



Livestock and feed in Prince Edward Island, 1871 (J. MacFadyen)

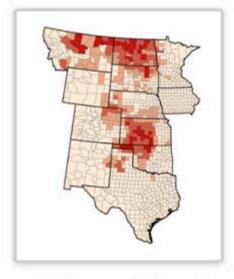
For an overview of the methodology see Ian Gregory, <u>A Place in History: A Guide to Using GIS in</u>

<u>Historical Research</u> (2002). For an example of a historian using HGIS to provide a new analysis of a major historical event, see Geoff Cunfer, <u>"Scaling the Dust Bowl"</u>.

Programming Historian Lessons (using free or open source software):

- Lesson 1: Google Map Engine Lite and Google Earth { Currently out of date }
- Lesson 2: Installing QGIS and Adding Layers
- Lesson 3: Creating New Vector Layers
- Lesson 4: Georeferencing

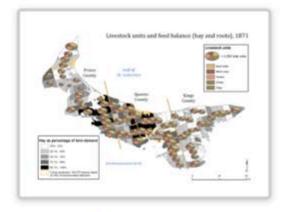
Required revisions immediately after launch



Great Plains Red Wheat Map



Georeferenced Historical Map



Livestock and feed in Prince Edward Island, 1871 (J. MacFadyen)

The following lessons are being prepared for open peer review. They will be published on the <u>Digital Tools</u> page of the NiCHE website after the pass peer review. Please use the comments to make suggestions for improvements.

- ArcGIS Lesson 1: Mapping Great Plains Population
- ArcGIS Lesson 2: Mapping Great Plains Agriculture
- ArcGIS Lesson 3: Georeferencing Maps
- ArcGIS Lesson 4: Digitizing Archival Maps
- ArcGIS Lesson 5: Overlay and Spatial Analysis

#### **Installing QGIS**

Navigate to the <u>QGIS Download page</u>. The procedure is a little different depending on your operating system. Click on the appropriate Operating System. Follow the instructions below.

#### Mac Instructions

• For most people it will be best to choose Master release (the one that has a single installer package). You will still need to install other software packages before installing QGIS. Under 4.2, click on the link (KyngChaos Qgis download page) and download the following two files (see screen shot below): 1) GDAL complete 1.10 framework package (under Requirements) and 2) QGIS 2.0.1 (under Download) for your respective Mac OS (this works with Lion, Mountain Lion, and Snow Leopard – no word yet on using it with the forthcoming Mavericks). Install these like any other Mac programs.



#### **Prince Edward Island Data**

We will be using some government data from the Canadian province of Prince Edward Island.

PEI is a great example because there is a lot of data for free online and because it is Canada's smallest province, making the downloads quick!

#### Download PEI shapefiles:

- Navigate to the links below in your web browser, read/accept the license agreement, and then download the following (they will ask for your name and email with each download).
   We created the final two shapefiles, so they should download directly:
- 1. <a href="http://www.gov.pe.ca/gis/license\_agreement.php3?name=coastline&file\_format=SHP">http://www.gov.pe.ca/gis/license\_agreement.php3?name=coastline&file\_format=SHP</a>
- 2. <a href="http://www.gov.pe.ca/gis/license\_agreement.php3?name=lot\_town&file\_format=SHP">http://www.gov.pe.ca/gis/license\_agreement.php3?name=lot\_town&file\_format=SHP</a>
- 3. <a href="http://www.gov.pe.ca/gis/license\_agreement.php3?name=hydronetwork&file\_format=SHP">http://www.gov.pe.ca/gis/license\_agreement.php3?name=hydronetwork&file\_format=SHP</a>
- 4. <a href="http://www.gov.pe.ca/gis/license\_agreement.php3?name=forest\_35&file\_format=SHP">http://www.gov.pe.ca/gis/license\_agreement.php3?name=forest\_35&file\_format=SHP</a>
- 5. <a href="http://www.gov.pe.ca/gis/license\_agreement.php3?name=nat\_parks&file\_format=SHP">http://www.gov.pe.ca/gis/license\_agreement.php3?name=nat\_parks&file\_format=SHP</a>
- 6. PEI Highways (alternate Tar file)
- PEI Places (alternate Tar file)



### PRINCE EDWARD ISLAND

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**GIS Data Catalog** 

Licensing Agreements

**Contact Us** 

**Forest Cover Mapping** 

**Provincial Road Atlas** 

Prince Edward Island Public Land Atlas

Euria Atlas

PEI Coordinate System

**GIS Policy Statement** 

**Cost of Distribution** 

**GIS Price List** 

Free GIS Products

Free GIS Products (con't)

#### GIS Data Layers

HOME /



#### **Downloading Instructions**

Click Download File:... and choose a directory and file name for the file.

#### **File Information**

Filename	Map File Owner	File Size (in bytes)	Last Modified
coastline	Department of Provincial Treasury	6722240	2013-10-08 01:10:56
Contains these files	coastline_polygon.shx	1660	2013-10-07 05:31:46
	coastline_polygon.prj	432	2013-10-07 05:31:44
	coastline_polygon.shp	24234784	2013-10-07 05:31:46
	coastline_polygon.dbf	456	2013-10-07 05:31:44

This file is a ESRI EXPORT (SHP)

File:Coastline Download File

Cancel



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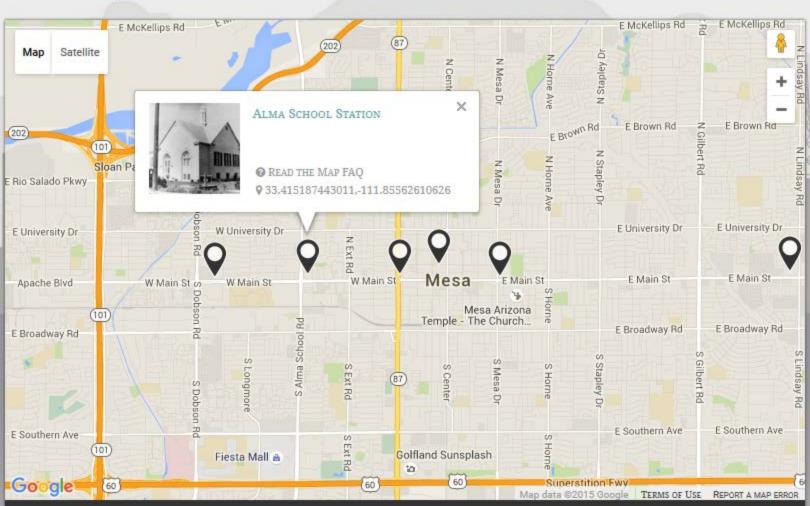
### **HGIS Course Project**





MESA

Home Stories Tours About



#### ALMA SCHOOL STATION

By The Mesa Preservation Foundation, Jay Mark & Mark Tebeau

**S** ettled by Mormon pioneers in 1880, "Stringtown" emerged as one of Mesa's earliest settlements-a linear district running south for a couple of miles along present-day Alma School Road.

Settlers dug an extension of the Mesa Canal canal bringing Salt River water to their farms. In 1883 they connected to a second irrigation channel – the Utah Extension Canal, which conveyed water from the Lehi community north of McKellips Road up onto the mesa.

Over the years, cottonwood trees proliferated, growing tall along these waterways. Known in Spanish as "álamo," these trees gave rise to the name Alamo Avenue, which by 1884 had been renamed Alma Avenue for a Mormon prophet. Today the street is called Alma School Road. None of the dwellings from the settlement period survived waves of urban development, but traces of the growth can be seen in the nearby Landmark Restaurant.

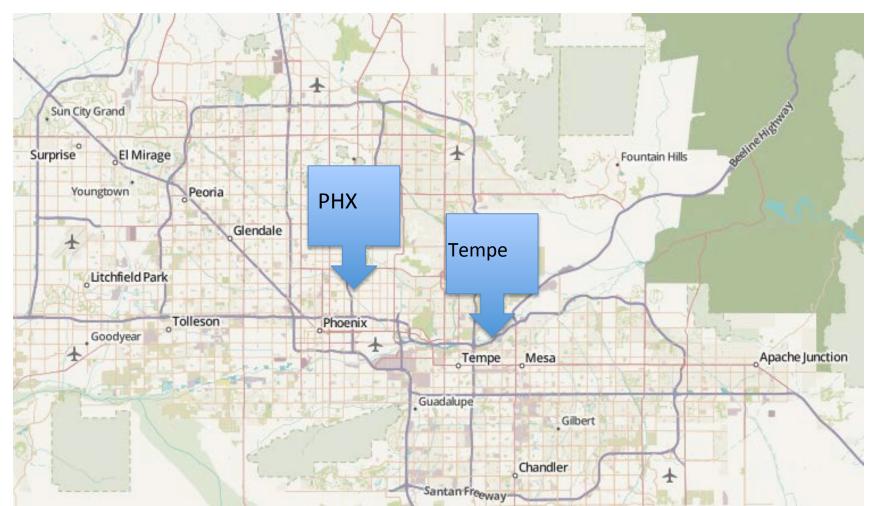
#### Alma Ward Church

The Mission-style Alma Ward Church was constructed by the Mormon community along Alma School Road in 1908 with bricks made on-site, the church congregation existed over 25 years. A growing congregation resulted in the 1908 Alma Ward Church's substantial expansion in 1937 – an east-west addition appended to the north face of the original building enclosing the earlier entrance into the interior of



### **HGIS Course Project**

- Phoenix Indian School
- Lost barrios, Tempe

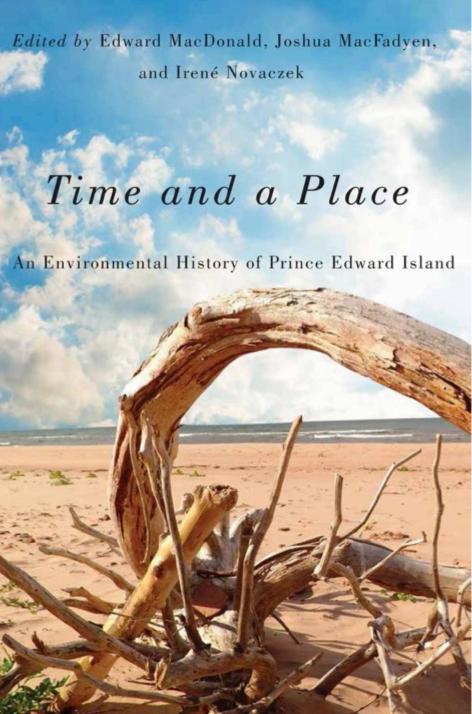


### Prince Edward Island Canada

#### Where is Prince Edward Island?

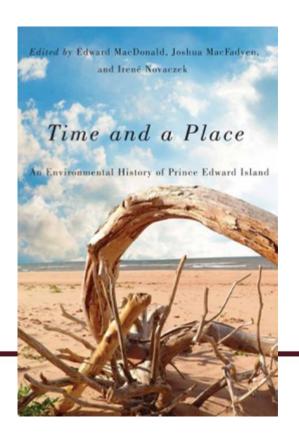


*Time and a Place* McGill-Queens U Press, June 2016





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