

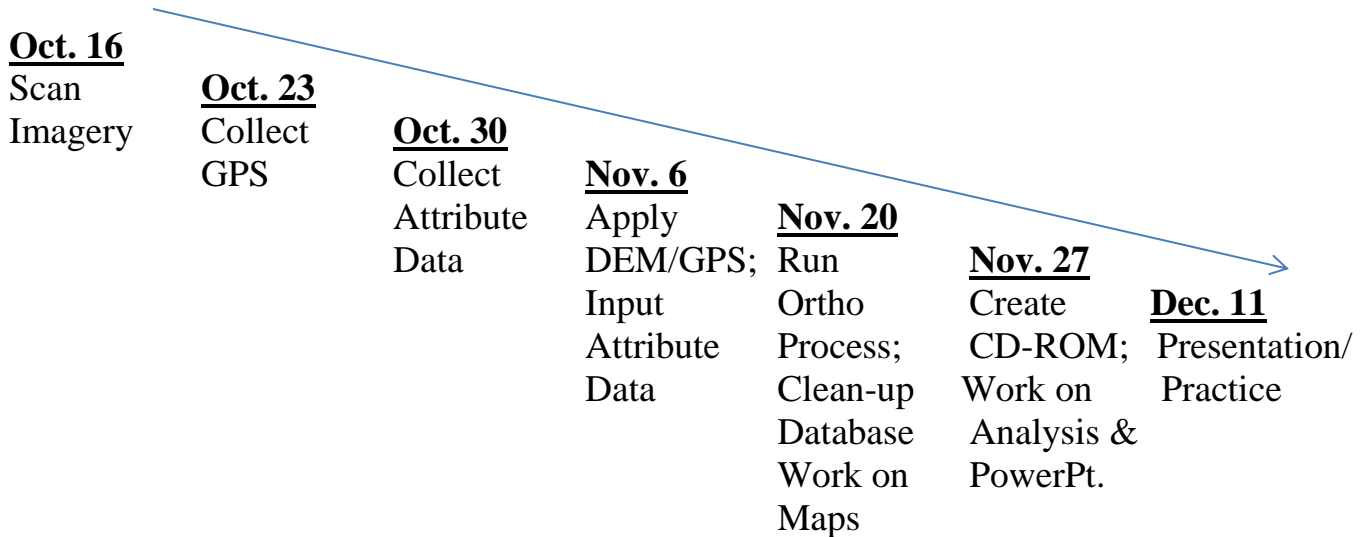
Carol L. Breton/Frank W. Catanzarite
CmpSc/Geogr 60 – Introduction to Geographic Information Systems
October 17, 2000

- 1.) **Title:** Using GIS to Create a Campus Information System With High Resolution Aerial Orthophotos of Columbia College, Sonora, Tuolumne County, California
- 2.) **Objectives:** Provide quality and improved aerial coverage of the Columbia College campus.
 - A. Imagery acquired on 3/22/00
 - B. Black and White imagery with a .77' output pixel
 - C. 8,315' X 8,315' per side
 - D. Scale = 1:11,086
- 3.) **Statement of the Problem:** Current aerial coverage is of poor resolution and is outdated; need to update with higher resolution.
- 4.) **Significance of the Problem:** This project will allow potential students to take a virtual tour of our campus, which in turn will increase enrollment and visibility. It can be utilized for planning and upgrading our emergency responses. It can be an ongoing process, updating, and improving projects for future students.
- 5.) **Methodology:**
 - A. Imagery (input acquired aerial photo data)
 1. Scan imagery at 1200 dpi (dots per inch)
 2. Take at least 9 GPS locations of campus
 3. Apply DEM/GPS to imagery
 4. Run ortho process
 5. Create CD-Rom of imagery and data
 6. Create Power Point presentation
 - B. Attribute Information (build geodatabase)
 1. List campus buildings by name
 2. List certificate/degree program directors
 3. List faculty/administration
 4. List courses by building, room, instructor and time

C. Manipulate Data

1. Join polygon data to attributes
2. Create interactive maps of campus buildings; clickable links to courses and instructors
3. Test system for errors
4. Create PowerPoint for Presentation

6.) Time/Task Schedule:



7.) Budget:

Quantity	Description	Unit Price	Cost
3	Images	\$ 10.00	\$30.00
433	Transportation (Miles)		\$225.00
4	CD-Rom	\$2.50	\$10.00
	Utilities		\$20.00
14	Meals	\$8.00	\$112.00
42	Labor Hours	\$18.00	\$756.00
		Total =	\$1,153.00

8.) Equipment List:

1) Hardware:

- Agfa scanner
- Garmin III+ GPS receiver
- Etower 400 – Pentium II

2) Software:

Arc View 3.0

DNR Garmin v. 2.4

Auto CADD 2000

Ortho Production v. 3.3

Corel Files v. 2.02

Microsoft Office 2010 (Word, Excel, PowerPoint)

9.) References:

Primary:

1. Tolhurst, Jeff, Director GIS Program – Columbia College, Consultant.
2. Nichols, James. CEO/President Terra-Mar Resources Information Services, Inc., Consultant.

Secondary:

1. *Getting to Know Arc View GIS*. Environmental Systems Research Institute, Inc. 1996-1998.
2. Aronoff, Stan. *Geographic Information System: A Management Perspective*. Ontario, Canada, 1995
3. Columbia College, *Columbia College Schedule of Classes – Fall 2000*, August 14, 2000 – December 14, 2000