

“GEO-visualization”: Building a Community College GIS Program

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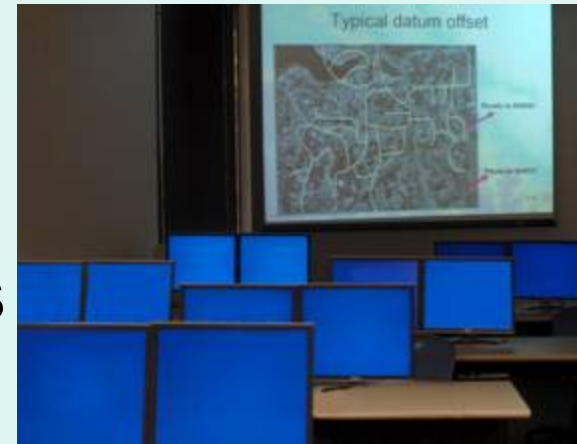
The Community College “Niche”?

- What is NOVA?
 - Largest educational institution in VA
 - 2nd largest community college in US
 - “The most economical state college in VA” (WJLA-TV, May '08)
- Traditional: undergrads matriculating to 4-year institution
- Newer: workforce development
- Newest: “Grad school” of the 21st Century
 - “Career switchers”



Program Development Milestones

- Market analysis
- Business case
 - Hardware, software, etc. costs
 - Class subscription rates (ROI)
- The GIS classroom/lab—hardware, software, network, IT support
- Program/course development, scheduling
 - Classroom & distance learning
- Faculty recruitment, adjuncts, training



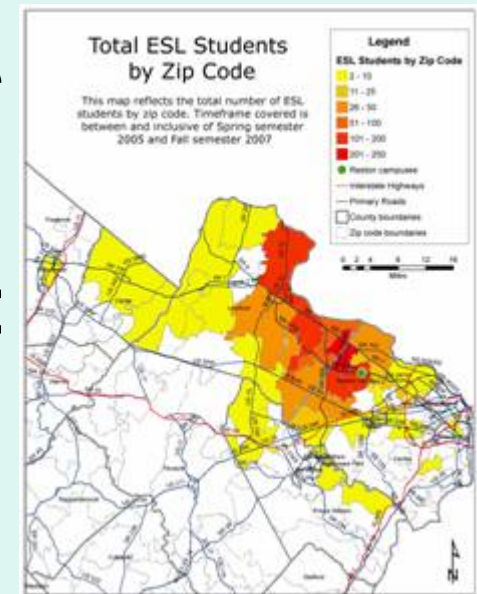
Essential Elements

- “Marketing” the program
 - GIS Day
 - Open houses (HS field trips)
 - Kid’s summer camps
 - Industry and government visits
 - Campus flyers
 - Internet—Geosciences web page, Facebook, U-tube
- GIS career studies certificate (29 hours)
 - GIS&T
 - Advisory group
 - GIS programs other schools (George Mason Univ)
 - Internships!



Keys to Success

- Student term projects (portfolio): knowledge & experience
- Internships
- Partnering & consulting—education (high schools, school districts 4-year schools); government (feds, counties); industry; non-profit

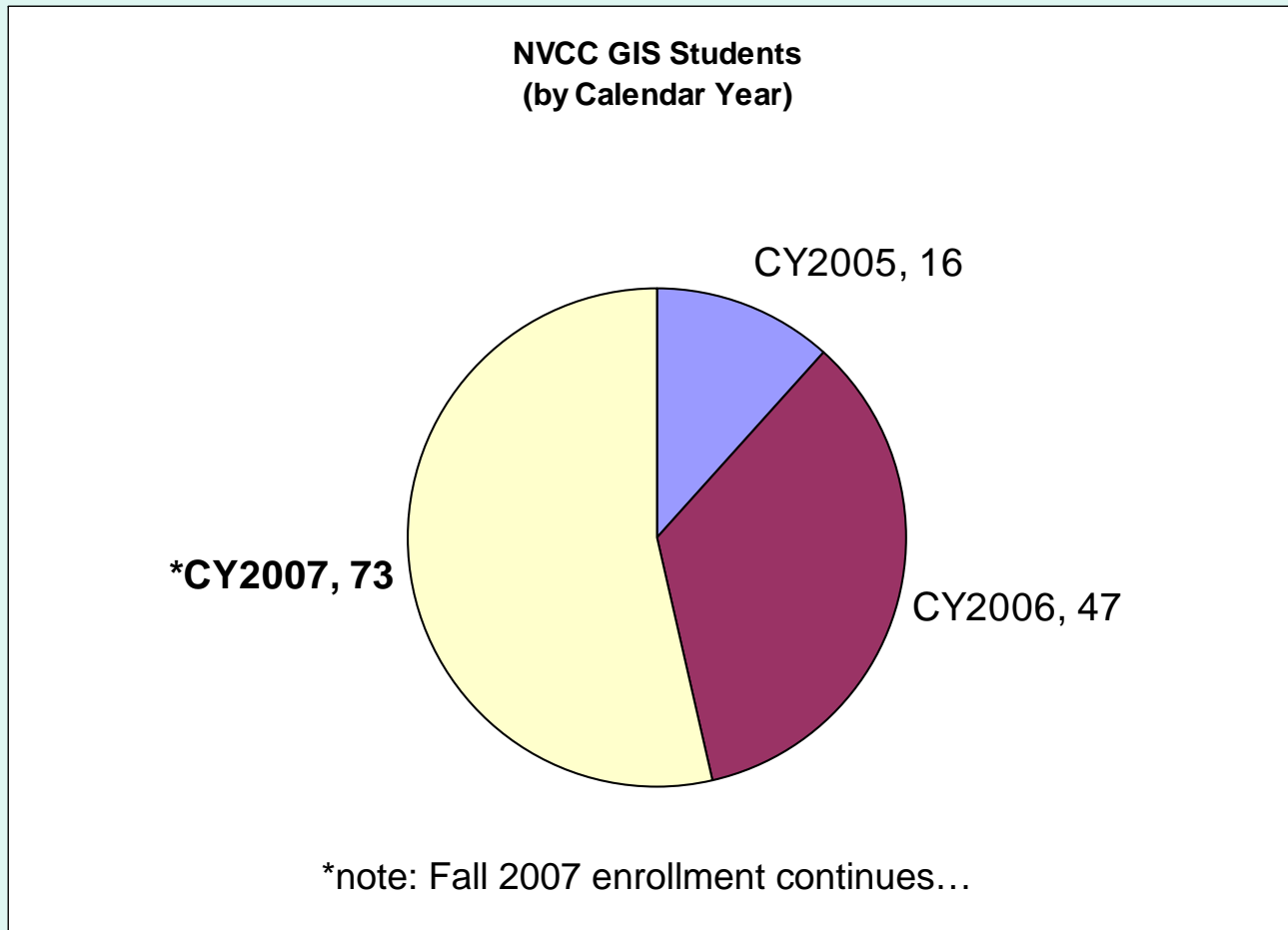


www.nvcc.edu/gis

Backups



NOVA's Growing GIS Program...



Who are NVCC GIS Students?

- “Typical” student:
 - Adult with bachelors degree (or higher)
 - 1/3 with IT background (programming, dBase management)
 - Engineers, surveyors well-represented
 - Career switchers or job enhancement
 - Grad students “in waiting”: GMU, VA Tech
- AOL, Dewberry, Boeing, SAIC, SPADAC, Fairfax County

Community College: the “New Grad School?”



NVCC GIS Offerings...

- Introductory, Intermediate and Advanced GIS
 - Each class includes labs & student term project
- Cartography for GIS
- GIS Applications in Environmental Science
- Intro to Remote Sensing
- GIS Internship
- GIS for Continuing Education
- GPS & Kids (summer program)



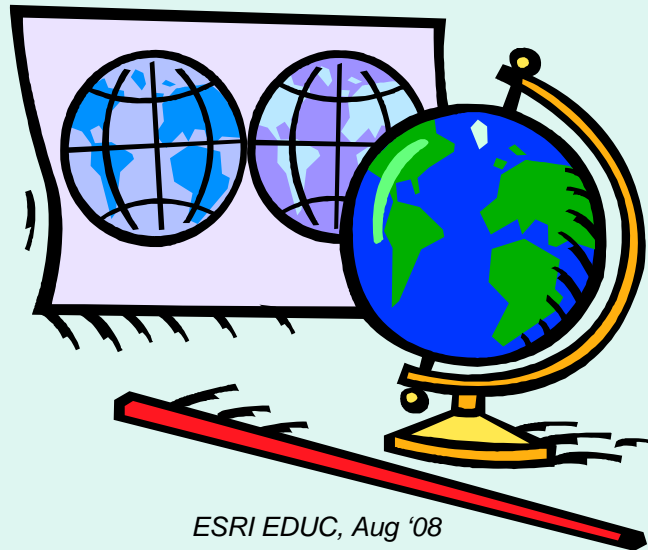
NOVA GIS Lab

- Hardware:
 - 24 student seats (primary classroom)
 - Dell workstations
 - Dual Xeon processors, 2GB RAM, 512K video card, 250GB storage
 - Dual 19" flat panel monitors
 - Dedicated Dell Server
 - Dual Xeon processors, 8GB RAM, 2 terabytes storage
- Software:
 - ESRI ArcGIS9.2 (ArcInfo license)
 - ArcGIS Server (Workgroup license)
 - ITT ENVI
 - IDRISI Andes



NOVA GIS Faculty

- Mr. Aaron Showker, NGA
- Ms. Lee Ebinger, USDA/SIS
- Ms. Melody Peppard, ITT Solutions
- Dr. Michael Krimmer, NVCC



GIS Certificate

Core Courses (23 hours required)

		<u>Credit Hours</u>
ENG/SPD	Elective	3
GIS200	Geographic Information Systems I	4
GIS201	Geographic Information Systems II	4
GIS205	GIS 3-Dimensional Analysis	4
GIS290	GIS Internship (1 to 3 hours, based on advisor input)	1
GIS295	Topics in GIS—Introduction to Remote Sensing	4
GEO220	World Regional Geography	3

Technical Elective Courses (3 hours required):

		<u>Credit Hours</u>
ENV/GIS230	GIS Applications in Environmental Science	3
GEO200	Intro to Physical Geography	3
GEO210	Intro to Cultural Geography	3
GIS293	Studies in Cartography for GIS	4
ITD110	Web Page Design (or higher ITD)	3
ITN101	Intro to Network Concepts (or higher ITN)	3
ITP112	Visual Basic.net (or higher ITP)	4
MTH241	Statistics I (or Math163 or higher)	3

Elective Courses (3 hours required):

Biology, especially ecology; Chemistry; Engineering; Environmental Science; Geography; Geology; History; Physics; Mathematics; Information Technology; Marketing

Some Student GIS Projects

- Elections
- “Green Roofs”
- Deer Hazard to Motorists
(Fairfax County, VA)
- Katrina & Danger to Historic Sites
- Re-introducing Wolves into Virginia
- Extreme Racing (ultra-marathons)

