

DACUM Research Chart for GIS Technician/Analyst

DACUM Panel

Michael J. Burke
Vice-President of Operations
Ag Spectrum Co. & The
Consulting Company (TCC)
Dewitt, IA

Greg Evans
GIS Lab Assistant
Jackson State Community College
Jackson, TN

Nicole Koppes
GIS Mapping Specialist
The Consulting Co.
Dewitt, IA

Aaron Shultz
GPS/GIS Specialist/Analysis
Ecolotree, Inc.
North Liberty, IA

Michael Sutton
Lab Technician
SST Development Group
Stillwater, OK

DACUM Facilitators

Dr. Gaines Miles, Purdue
University
Janie Thomas, Team Leader

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*The National Center for Agriscience & Technology Education
Kirkwood Community College
PO Box 2068
Cedar Rapids, IA 52406
Phone: 1-866-424-5669 (toll free)
Fax: 1-319-398-7109*



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COLLEGE OF EDUCATION
THE OHIO STATE UNIVERSITY
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Duties		← Tasks →				
A	Define Project Parameters	A-1 Determine project needs	A-2 Establish project standards (e.g., layout & format consistency)		A-3 Determine data to be obtained	A-4 Determine project timeline
	B	Initiate GIS Projects	B-1 Create directory structure	B-2 Create naming conventions	B-3 Obtain area of interest boundary data	B-4 Obtain base data (e.g., roads, streams, political boundaries, cities)
B-10 Back-up raw data						
C	Process Spatial Data	C-1 Convert raw data into format of choice	C-2 Validate boundary data	C-3 Validate agronomic data	C-4 Match location points with attributes	C-5 Import obtained data
D	Analyze Processed Data	D-1 Observe data anomalies	D-2 Report data anomalies	D-3 Choose data for analysis	D-4 Compare data layers	D-5 Combine data layers
E	Create Usable Products	E-1 Make project recommendations	E-2 Produce application recommendation files	E-3 Export application recommendation files		E-4 Make project maps
F	Expand Professional Knowledge & Skills	F-1 Evaluate personal performance	F-2 Seek additional training	F-3 Visit trade shows	F-4 Review industry publications	F-5 Network with industry professionals

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A-5 Coordinate data collection	A-6 Request equipment & supplies (e.g., hardware, software)					
B-5 Obtain agronomic data (e.g., soil test, yield)	B-6 Obtain imagery data (e.g., satellite, aerial)	B-7 Obtain terrain feature data (e.g., soil type, topography)		B-8 Obtain land use data	B-9 Obtain climatic data (e.g., precipitation, wind, temperature)	
C-6 Interpolate point data	C-7 Create recommendation equations	C-8 Calculate defined yield	C-9 Interpolate defined yield			
D-6 Analyze data statistically	D-7 Finalize data sets					
E-5 Generate field reports (e.g., budget, input quantities)		E-6 Create project presentation(s)	E-7 Back-up finished project files	E-8 Present completed products		
F-6 Explore new process techniques	F-7 Train co-workers					

General Knowledge and Skills

Knowledge of statistics
Knowledge of application equipment capabilities/limitations
Understanding of equipment interactions
Analytical skills
Time management skills
Data entry skills
Troubleshooting skills
Data transfer skills
Technical operating skills
Above-average computer skills
People skills – public relations, communication
Critical thinking skills
Communication skills: verbal & written

Worker Behaviors

Consistent
Open-minded
Patient
Observant
Attentive to detail
Trustworthy with confidential information
Industrious

Tools, Equipment, Supplies and Materials

Computer (high speed)
High-quality printer
GIS software
Various other software: Word processing s/w,
Spreadsheet s/w, Database s/w,
Presentation s/w

Future Trends and Concerns

Increased use of GIS technology to address environmental concerns
More rapid adoption of GIS technology to take advantage of government farm programs
More rapid adoption of GIS technology as general public awareness increases
Increased use of GIS technology as customers realize economic benefits

Acronym

GIS = Geographic Information System