

General Knowledge

Application specific knowledge (forestry, agriculture, natural resources, geography, geology)
Cartography
Data/software licensing
Datum transformations
Familiarization with remote sensing data resources
Geodesy
GIS technology
GPS technology
Histograms
History of study site
Information technology (IT)
Managing very large data sets
Map projections
Measurement space (spectral)
Natural history of study site
Principles of sensor design for RS
Probability
Radiometric physics (principles for RS)
Software
Software & hardware management
Spectral signatures (reflectance)
Statistics

Skills

Analytical
Communication
Design
Detective
File management
Information Technology (IT)
Math
Navigating graphical user interface
Organizational
Presentation
Problem solving
Spatial aptitude
Visual interpretation
Writing

Worker Behaviors

Attention to detail
Creativity
Focused
Innovative
Jack of all trades
Multi-tasking
Open-minded
Patience
Risk taker
Take charge attitude
Take initiative
Teachable
Tech savvy
Tenacity
Trouble shooter
Willingness to learn
Work independently

Tools, Equipment, Supplies and Materials

Aerial photographs
Binoculars
Camera
Clinometer
Clipboards
Compass
Densimeter
Desktop computer
Digital Elevation Models (DEMs)
Digital images
Fisheye lens
Flagging tape
Frag Stats / Patch Analyst
GIS software
GPS receivers
Image processing software

Laptop computer
Large format color printer
Laser range finder
Leaf Area Index (LAI) 2000
Manuals & books
Measuring tape
Personal Digital Assistant (PDA)
Printer (small format color)
Sensor platforms
Sensors
Server
Spectrometers
Stereoscopes
Topographic maps
Tree diameter tape
Vehicle (4-wheel drive)

Future Trends and Concerns

Growing emphasis on object based image analysis
Growing use of virtual globes & cities
Higher temporal frequency for image data
Increasing of usability of remote sensing data
More active sensors
More Lidar
More variable data pool
Rapidly declining costs
Three-dimensional image creation

DACUM Research Chart for Remote Sensing Specialist

DACUM Panel

Charles Clancy, GIS/Remote Sensing & Geodesy Analyst, Chevron Energy Technology Company, San Ramon, CA
Lawrence Fox III, Emeritus Professor and Senior Advisor, Institute for Spatial Analysis, Humboldt State University, Arcata, CA
Kevin Koy, Manager, Geospatial Innovation Facility, U. C. Berkeley, Berkeley CA
Laura E. P. Rocchio, Senior Outreach Scientist, Science Systems Applications Inc., Los Angeles, CA
Cindy Schmidt, Research Scientist, San Jose State Foundation/NASA, NASA Ames Research Center, Moffett Field, CA

DACUM Facilitators

John Johnson, Facilitator
Chris Lewis, Recorder
Chris Cruz, West Valley College, Recorder

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