

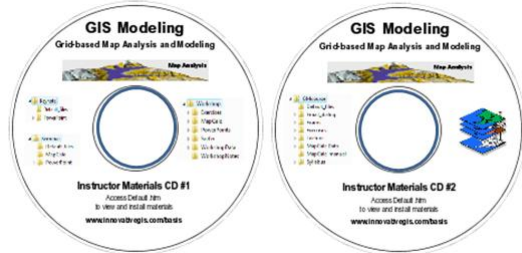
Instructor Materials for Grid-based Map Analysis and Modeling

Materials developed by Joseph K. Berry — email jberry@innovativegis.com if you have questions or encounter problems

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[click here](#) for a printer-friendly version of this document ; posted online at www.innovativegis.com/basis/Books/InstructorCDs/

(US\$45)



The ***Instructor Materials*** for Grid-based Map Analysis and Modeling is a two CD set of teaching materials for four levels of presentations—1 hour Overview Lecture, 2 hour Seminar, 8 hour Workshop and 10 week College Course ...over 300 slides and hours of hands-on exercises describing the principles, procedures, considerations and practical applications of grid-based map analysis. The College Course materials include laboratory lessons, projects and even exam questions and answers. A

companion textbook, [Map Analysis: Understanding Spatial Patterns and Relationships](#), supports the extended Workshop and College Course offerings.

Most Geotechnology teaching materials focus on Geographic Information Systems (GIS) capabilities of computer mapping and spatial database management, while few provide an understanding of its analytical potential and practical realities in a non-technical manner. The unique character of these materials draws from the author's ability to convey seemingly complex concepts of spatial data and map analysis operations in words that resonant with less technically versed audiences. The result is an extensive set of PowerPoint slides, background readings, and hands-on exercises that engage students to “think spatially” and formulate new and innovative solutions to complex spatial problems. Key to this process is a paradigm shift that extends the traditional paper map perspective of “where is what” to the modern perspective of “why and so what.” Within this context, maps become data and map analysis becomes the means to derive information about spatial patterns and relationships within and among map layers (see paper on [general approach](#); paper on [conceptual framework](#); and online book [Beyond Mapping III](#)).

Ordering Instructor Materials CD set: US\$ 45.00 plus shipping and handling (\$5.00 in US and Canada; \$30.00 other international). Checks and money orders drawn on U.S. banks are accepted. Distribution is by the author and payment should be made to...

Joseph K. Berry
1701 Lindenwood Drive, Fort Collins, Colorado, 80524 USA

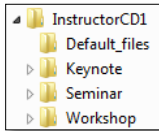
The CD set is not available through a bookseller; hence there is not a mechanism for accepting credit card purchases. Contact the author at jberry@innovativegis.com for more information on direct deposit or other arrangements, including gratis (fee) copies for qualifying faculty.

The materials reflect the circumstances of their original presentation and are not intended for direct use. Users are encouraged to reorganize, edit and integrate the materials with other resources as appropriate for tailoring class offerings. Much of the material was developed and originally presented at the University of Denver and the author greatly appreciates the opportunity to serve as the Keck Scholar in Geosciences with Department of Geography. Without this intellectually stimulating atmosphere these materials would not have been developed.

The *Instructor Materials for Grid-based Map Analysis and Modeling* includes several sets of resources developed by Joseph K. Berry (© Joseph K. Berry, 1990-2008). **You are free to use the materials for educational purposes.** If you use copies of the materials for professional presentations and papers, please reference as Berry, www.innovativegis.com/basis” within any graphics and cite in the references section as “*Instructor Materials (2009)* by Joseph K. Berry, jberry@innovativegis.com, BASIS, www.innovativegis.com/basis.”

As appropriate, cite the MapCalc Learner software as “MapCalc Learner by BASIS; www.innovativegis.com, Fort Collins, Colorado, USA” and the Surfer Tutorial software as “Surfer Tutorial software by Golden Software; www.goldensoftware.com, Golden, Colorado, USA.”

Instructor CD #1

 — Listing of CD contents:

InstructorCD1\Default.htm on the Instructor CD#1 disk for links to **Keynote**, **Seminar** and **Workshop** materials briefly described below. See Instructor CD#2 for materials supporting an upper division/graduate College Course.

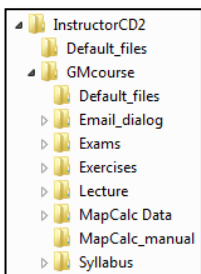
Keynote folder — contains handout and PowerPoint slides with extended links for an overview presentation on *Geotechnology* (1 hour). This presentation provides an encompassing framework for the field of Geotechnology (Remote Sensing (RS), Global Positioning System (GPS) and Geographic Information Systems (GIS)) with particular emphasis is given to the Grid-based Map Analysis and Modeling capabilities of GIS technology. ([Keynote description](#))

Seminar folder — contains materials for an introductory presentation on *Grid-based Map Analysis and Modeling* (2 hours). This presentation introduces the underlying concepts, procedures and considerations supporting Grid-based Map Analysis and Modeling using numerous real-time demonstrations. Software and tutorial materials are provided for students interested in hands-on experience as homework. ([Seminar description](#))

Workshop folder — contains materials for a workshop on Grid-based Map Analysis and Modeling (1 day; 8 contact hours). The workshop provides an extensive experience with the concepts, underlying theory, data considerations, procedures, and practical considerations in applying advanced grid-based map analysis techniques. It investigates spatial analysis and spatial data mining approaches using numerous hands-on examples of analytical techniques and applications from natural resources management, environmental assessment, precision agriculture and geo-business. The one day session assumes instructor demonstrations; the workshop should be extended to two days (16 contact hours) for participant completion of the eight exercises. ([Workshop description](#))

The Keynote and Seminar can be combined for a half-day session with a general audience for the Keynote presentation (both non-GIS and GIS interested participants) followed by the Seminar for a targeted audience (GIS interested participants). This format works very well for presentations at conferences and large organizations. Instructors are encouraged to review the online book *Beyond Mapping III* (www.innovativegis.com/basis/MapAnalysis/Default.htm) for additional materials for tailoring presentations to particular audiences.

Instructor CD #2

 — Listing of CD contents:

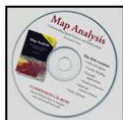
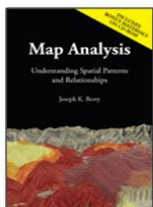
InstructorCD2\Default.htm on the Instructor CD#2 disk for links to materials supporting an upper division/graduate **College Course** briefly described below. See Instructor CD#1 for materials supporting Keynote, Seminar and Workshop presentations.

Syllabus folder — contains a detailed description of the course designed for a ten week term. ([Course description](#); online course materials at www.innovativegis.com/basis/Courses/GMcourse09/)

GMcourse\Default.htm — contains the main page for the class website with links to the Syllabus and all materials supporting the course (Lectures, Exercises, Exams, Data, and reference materials).

All of the materials use MS Office formats and can be edited to fit an instructor's needs. Once updated, the entire \GMcourse folder can be copied to a server for Local Area or Internet access by students.

Map Analysis: *Understanding Spatial Patterns and Relationships* textbook is recommended for the extended hands-on Workshop and College Course offerings. The book contains a companion CD with color graphics, further readings, exercises and fully licensed (single seat) software for hands-on experience.



Map Analysis: *Understanding Spatial Patterns and Relationships*

US\$ 45 plus shipping; www.innovativegis.com/basis/Books/MapAnalysis/Default.htm