

Courses
(developed and taught)

Arid-zone (Vadose) hydrology

1. Unsaturated zone hydrology – (4 credits, graduate, co-developed and co-taught, University of Colorado, USA, 2004, 2005, 2006, 2008; 4 continuing education credits, workshop for Middle East Peace Process; scientists from Jordan, Israel, Palestine, 2005)

Groundwater hydrology

2. Quantitative hydrogeology (4 credits, undergraduate, developed and taught, Colorado College, 2003)
3. Groundwater modeling (4 credits, undergraduate, developed and taught, University of Brasilia, Brazil, 2012; 4 continuing education credits, National Training Center, USGS, Denver, CO, 2011; CDRF Workshop, Ground Water Modelling Laboratory and Scientific Institute of Irrigation, Bishkek, Kyrgyzstan, 2011)
4. Multicomponent reactive transport modeling (4 credits, graduate, co-developed and co-taught, University of Kuopio, Finland, 2007)

Surface-water hydrology

5. Advanced concepts in watershed management (4 credits, graduate, developed and taught, Universidad Centroamericana, 2006)
6. Modeling coastal water flooding, mud and debris flows (4 credits, graduate, developed and taught, Universidad Centroamericana, 2003)
7. Watershed hydrology (4 credits, graduate, developed and taught, Universidad Centroamericana, 2005)

Applied hydrology

8. Artificial adaptive mathematical models in medicine and the environment (4 credits, graduate, co-developed and co-taught, semester; University of Colorado, USA, 2013)
9. Applied statistics (4 credits, undergraduate, developed and taught, University of Colorado, USA, 2009; University of Brasilia, Brazil, 2011; University of Campinas, Brazil, 2011)
10. Applied modeling and uncertainty analysis in earth science (3 credits, graduate, developed and taught, University of Campinas, Brazil, 2013)
11. Assessing and managing environmental risks (4 credits; graduate, developed and taught, Universidad Centroamericana, 2005 and 2006)
12. Ecological risk assessment (3 credits, graduate, co-developed and co-taught, University of Kuopio, Finland, 2007)
13. Hydrogeophysics (4 credits, graduate, developed and taught, University of Brasilia, Brazil, 2008; University of Campinas, Brazil, 2008)
14. Multivariate statistics (2 credits, graduate, developed and taught, University of Brasilia, Brazil, 2012; University of Campinas, Brazil, 2012)
15. Multivariate statistics, machine-learning, and hybrid modeling (3 credits, graduate, developed and taught, University of Brasilia, Brazil, 2013; University of Campinas, Brazil, 2013)

16. Model calibration and predictive analysis in earth science (4 credits, graduate, developed and taught, Universidad Centroamericana, El Salvador, 2004, 2005; University of Brasilia, Brazil, 2004; University of Campinas, Brazil, 2005)
17. Model fitting, calibration, uncertainty analyses in the geosciences (4 credits, graduate, developed and taught, University of Brasilia, Brazil, 2008; University of Campinas, Brazil, 2008)