

# CV | TIMOTHY D. BECHTEL, PHD, PG



## Education

PhD, Geophysics, 1989, Brown University, RI  
M.Sc., Rock Mechanics, 1984, Brown University, RI  
B.Sc., Geology, 1982, Haverford College, PA

## Experience

February 2018 - Present: Senior Geophysics Project Manager, RETTEW Associates, Inc., Lancaster, PA.  
January 2009 - Present: *Adjunct Professor*, then *Visiting Scholar*, then *Visiting Professor*, then *Director of Science Outreach and Senior Teaching Professor of Geosciences*, Franklin & Marshall College, Lancaster, PA.  
November 2023 – Present: *Adjunct Graduate Professor*, University of Memphis, Memphis, TN.  
October 2000 - August 2016: *Adjunct Graduate Professor*, University of Pennsylvania, Philadelphia, PA.  
February 1992 - February 2018: *Principal Geophysicist*, Enviroscan, Inc., Lancaster, PA.  
June 1989 - April 1992: *Geophysics Division Manager*, Tethys Consultants, Inc., Harrisburg, PA.  
July 1988 - May 1989: *Branch Manager*, Kurz Associates, Inc., Providence, RI.  
March 1987 - June 1988: *Geology/Geophysics Project Manager*, Kurz Associates, Inc., Bridgewater, MA.

## Professional Registrations

Certified Professional Geologist (PG) in Pennsylvania (and all other states with ASBOG reciprocity)

## Professional Affiliations

AGU - American Geophysical Union - Member  
AEG - Association of Engineering Geologists - Member  
EEGS - Engineering and Environmental Geophysical Society - Member  
GSA - Geological Society of America - Member  
IAH - International Association of Hydrogeologists - Member  
IAH - International Association of Hydrogeologists, Karst Commission - Appointed Member  
IEEE - Institute of Electrical and Electronics Engineers - Member  
SAS - Society for Archaeological Science - Member  
SEG - Society of Exploration Geophysicists - Member  
UCS - Union of Concerned Scientists - Member  
*Hydrogeology Journal* - Associate Editor  
*Journal of Sensing & Imaging* - Associate Editor  
*IEEE Transactions in Geoscience and Remote Sensing* – Frequent Reviewer  
*Acta Carsologica* – Frequent Reviewer

## Awards and Honors

Geological Society of America – *Eugene and Carolyn Shoemaker Public Service Award*, 2020  
Geological Society of America – Elected Fellow, 2021  
American Geophysical Union – Best student paper, 1985 Fall Meeting

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## Continuing Education

Geophysical Survey Systems, Inc. Ground Penetrating Radar, 1987

Geonics, Ltd., Electromagnetics, 1988

OSHA, 40-Hour Hazardous Waste Site Workers with Annual 8-Hour Refreshers, 1988 - present

SEG, Engineering Geophysics Course, 1990

Z Environmental, Geoarchaeology Short Courses, 1991 and 1992

SEG, Shallow Seismic Reflection, 1993

COLOG, Inc., Borehole Geophysical Logging, 1994

U.S. Army, Ordnance Recognition, 1995 and 1996

U.S. Department of Defense Radiation Site Workers, 1996

LaCoste & Romberg, Inc., Underwater Gravity, 1996

University of Arizona, High-Resolution Shallow Geophysics Short Course, 1997

Trimble Navigation, Advanced Differential and Real-Time Global Positioning Systems (GPS), 1998

OSHA, Process Safety Management Training, 1999

Advanced GPR Courses, 1991 and 2001

SAGEEP/USACE, Unexploded Ordnance (UXO), 2002

Robertson Geologging, Borehole Geophysical Logging, 2004

Pennsylvania Council of Professional Geologists, Borehole Geophysical Logging, 2006

The Pennsylvania State University, Radiation Site Workers, 2007

U.S. Department of Energy, Radiation Site Workers, 2008

Level I Thermography Certification, 2008

Loss Prevention Systems (LPS) with annual updates, 2009 - present

Rocky Mountain Mineral Law Foundation, Development Issues in the Major Shale Plays, 2010

Midwest GeoSciences Group, Borehole Flowmeter Measurement and Analysis, 2012

Introduction to the Natural Gas Industry, Infrastructure and Regulations, EUCL, Pittsburgh, PA, 2012

Kansas Geological Survey, Advanced High-Resolution Shallow Seismic Reflection, 2013

EduMine, Underground Mining Methods and Equipment, 2013

Pennsylvania Council of Professional Geologists, Blast and Vibration Monitoring and Control, 2014

NYS Geological Survey, Hydraulic Fracturing and the New York Moratorium, 2014

Edwards Aquifer Authority, Dye Tracing in Karst Aquifers, 2014

University of Queensland, Climate Science, 2015

EduMine, Underground Mining Practice, 2017

Design Thinking Workshop, Stanford University, 2018

Advanced Side Scan Sonar Training, Black Laser Learning, 2019

Tromino HVSR training, Exploration Instruments, 2020

3DEXPERIENCE, Dassault Systèmes, 2020

Passive seismic data collection and processing, Exploration Instruments, 2021

Groundwater Hydrology, Purdue University, 2022

The Science of Energy, Washington University in St. Louis, 2023

Petroleum Geology, TU Delft, 2024

## Contact Info

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[tbechtel@fandm.edu](mailto:tbechtel@fandm.edu) 717.468.8556

# COURSES TAUGHT | TIMOTHY D. BECHTEL, PHD, PG

## Hydrogeology and Management of Karst Terranes (1- or 2-day Short Course)

- 2007 University of Neuchatel, Switzerland
- 2009 Pennsylvania Council of Professional Geologists, Harrisburg, PA
- 2010 Lancaster-Lebanon IU-13, Lancaster, PA
- 2013 Mine Water Solutions, Lima, Peru
- 2014 Eötvös Loránd University, Budapest, Hungary

## Karst Geophysics (1/2-day Short Course)

- 2010 Lebanon Conservation District, PA
- 2011 Chester County Engineering Society, PA

## Karst Hydrogeology (1-semester)

- 2015 (Spring) Franklin & Marshall College, Lancaster, PA
- 2019 (Spring) Franklin & Marshall College, Lancaster, PA
- 2022 (Spring) Franklin & Marshall College, Lancaster, PA
- 2024 (Spring) Franklin & Marshall College, Lancaster, PA

## Karst Hydrogeology Field Camp (4-day Field Course)

- 2014-2024 (Summer) Karlsruhe Institute of Technology, Hochifen-Gottesacker Alps, Austria

## Trade-offs Between GPR and other Non-Destructive Testing Techniques for Evaluation of Structural and Architectural Elements (1-day Short Course)

- 2010 GPR2010, Lecce Italy

## Earth, Environment & Humanity (1-semester with Lab)

- 2009-2024 (Spring and Fall) Franklin & Marshall College, Lancaster, PA

## Global De-Mining (1-semester)

- 2010 (Spring) Franklin & Marshall College, Lancaster, PA
- 2012 (Spring) Franklin & Marshall College, Lancaster, PA

## Geocomputation (1-semester)

- 2005 (Fall) University of Pennsylvania, Philadelphia, PA
- 2008 (Summer) University of Pennsylvania, Philadelphia, PA

## Introduction to Geophysics (1-semester)

- 2000-2015 (Spring) University of Pennsylvania, Philadelphia, PA
- 2020 (Spring) Franklin & Marshall College, Lancaster, PA

## Geophysics and Remote Sensing for Archaeologists (1- to 3-day Short Course)

- 1994 University of Houston, Houston, TX
- 1998 PA Geologic Survey, Harrisburg, PA
- 2010 Franklin & Marshall College, Lancaster, PA
- 2014 University of Pennsylvania, Philadelphia, PA

## Geotechnics (1-semester)

- 2010 (Summer) University of Pennsylvania, Philadelphia, PA

## Petroleum and the Future of Energy (1-semester)

- 2015 (Spring) Franklin & Marshall College, Lancaster, PA
- 2017 (Spring) Franklin & Marshall College, Lancaster, PA
- 2022 (Fall) Franklin & Marshall College, Lancaster, PA

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## Engineering Geology: Rock Mechanics (1-semester)

- 2010 (Fall) University of Pennsylvania, Philadelphia, PA
- 2011 (Fall) University of Pennsylvania, Philadelphia, PA
- 2010 (Spring) University of Pennsylvania, Philadelphia, PA
- 2011 (Fall) University of Pennsylvania, Philadelphia, PA
- 2012 (Fall) University of Pennsylvania, Philadelphia, PA

## GeoEngineering (1-semester)

- 2012 (Summer) University of Pennsylvania, Philadelphia, PA
- 2014 (Fall) Franklin & Marshall College, Lancaster, PA

## Design Thinking (1-semester)

- 2019-2020 (Spring and Fall) Franklin & Marshall College, Lancaster, PA

## Unconventional Oil & Gas (1-semester)

- 2013 (Summer) University of Pennsylvania, Philadelphia, PA
- 2013 (Spring) Franklin & Marshall College, Lancaster, PA
- 2014 (Fall) Franklin & Marshall College, Lancaster, PA
- 2015 (Spring) Franklin & Marshall College, Lancaster, PA

## Experiential Elementary Science Teaching (Full Year)

- 2014-2023 Franklin & Marshall College, Lancaster, PA

## Seismic Shear Wave Analysis and Seismic Hazards (3-day)

- 2013 Virginia Tech

## NEH Summer Institute, Duffy's Cut: Investigating Immigration, Industrialization, and Illness in 19th Century America "A Perfect Storm"

- July 11-July 29, 2016, Immaculata University

## Introduction to Hydraulic Fracturing and the Marcellus and Utica Shales (2-6 hours)

- 2012 UPenn Dept. of Earth & Environmental Science Senior Seminar
- 2013, 2014 UPenn Medical School STEER Program
- 2013 Friends of the Wissahickon
- 2014 UPenn Engineering "Science Café"
- 2014 Philadelphia Mineralogical Society
- 2014 SETAC Conference, Jamaica Bay National Wildlife Refuge
- 2014 Lancaster Chamber of Commerce and Industry
- 2015 Oberstdorf (Germany) Chamber of Commerce

## Climate Crisis, Human Health, and Justice; a Data Science Exploration

- 2022 (Fall) Franklin & Marshall College, Lancaster, PA
- 2024 (Spring) Franklin & Marshall College, Lancaster, PA

## Environmental Impacts of War

- 2022 (Fall) Franklin & Marshall College, Lancaster, PA
- 2024 (Fall) Franklin & Marshall College, Lancaster, PA

## Groundwater Resources

- 2022 (Spring) Franklin and Marshall College, Lancaster, PA
- 2024 (Fall) Franklin and Marshall College, Lancaster, PA