

**SPWLA NMR TRAINING INSTRUCTOR LEAD COURSE**  
**CLASS SUMMARY AND INSTRUCTOR BIO**  
**DATE: September 12-14, 2022**

**Course Title:** NMR Fundamentals and Advanced Interpretations

**Summary**

Day one of this course teaches the basics of NMR logging. Day two and three of this course goes into more advanced concepts including echo processing, fluid characterization, NMR in unconventional, and recent advances.

**Duration and Training Method**

This course is 3 days (8am – 12pm) of lectures on-line.  
1 Basic to Advanced Class (12 total hours)

**Expectations**

Participants should leave the class with good understanding of the fundamentals of NMR logging.

**Topic Outline**

Day One  
NMR spin echo basics  
Echo processing, T2 inversion  
Porosity, bound fluid and permeability from NMR  
T1 logging  
T1 and T2 relaxation mechanisms  
T1 and T2 interpretation  
Basics of NMR processed logs  
Intro to fluid characterization from NMR  
Basics of NMR log quality control  
Basics of log-core data integration for NMR

**Day Two and Three**

Steps in echo processing, inversion  
Internal gradients, mineral effects  
Alternate models for bound fluid and permeability  
Fluid characterization  
Recent advances  
NMR for unconventional

**Lab Exercises**

No

**Who Should Attend?**

Day one of this course is primarily aimed for all Geoscientists. Day two and three of this course would also be useful for all, however is more aimed toward those who use, process, or interpret NMR data on a more frequent basis.

**Prerequisites**

A basic understanding of well logging.

### **Teaching Methods**

Lectures with extensive question and answer. Attendees are encouraged to bring questions based on their own case studies. Some time will be provided after the course on each day to review case these case studies one on one as time allows.

### **Course Schedule**

3 days

### **Handouts provided**

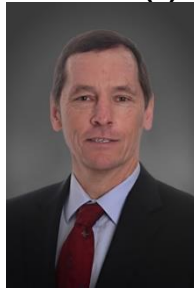
Yes PDF

### **Reference Publications**

SPWLA Journals

SPWLA Annual Symposia

### **Instructor(s) Photo**



### **Course Instructor Bio(s)**

Course instructor Brian Stambaugh has 39 years of oil and gas industry experience with 24 years of that consulting on projects worldwide. Graduating with a BSME from South Dakota School of Mines, initial assignments were with Schlumberger and as Computing Center Manager for Numar Corp. As a consultant (NMR Petrophysics LLC), he has taught 58 short courses on magnetic resonance logging, and bypassed/unconventional resources to over 1000 fellow Geoscientists since 1997. In addition to teaching, he provides Petrophysical studies as well as guidance and processing services on magnetic resonance logging to many oil/gas exploration and service companies. Major consulting projects have included pioneering work for ConocoPhillips Cote D'Or Eagleford, Burlington/ConocoPhillips/Leor Savell and Amoruso Deep Bossier Fields, Marquette Exploration Utica, Lundin Petroleum Johan Sverdrup Field, and Kerr McGee Bohai Bay along with ongoing work on other discoveries. Other recent and ongoing projects are in East Texas, Permian, Williston Basins and Europe. He has authored papers on NMR logging and served as an SPWLA Distinguished Lecturer and SPE Technology Update Speaker as well as providing AAPG short courses.

### **REGISTRATION**

Course Date: SEPTEMBER 12-14, 2022

Course Fee: Professional \$550.00, Student in University \$150.00