Successful technical writing involves more than simply putting technical words in a technical document. Documents must communicate. If the readers don’t get the message, the document failed. Understanding and implementing effective communication practices means addressing a full range of issues. This course addresses those issues. Following is a preliminary outline of this course. The instructor designed this course so that participants leave the course knowing how to be better writers than when they entered. Participants should come prepared to listen, to discuss and ask questions, but mostly prepared to change.

1) Introduction
   a) Description of Course
   b) Goals of the Course

2) Background, Overview, and Philosophy
   a) The Document
   b) The Reader
      i) Needs and Expectations
   c) The Writer(s)
      i) Objectives, Motivation, Empathy
   d) Matching Writer’s Objectives with Readers Needs and Interests

3) Tools and Building Blocks
   a) Grammar and Punctuation: Mistakes, Sins, and Pitfalls
   b) Syntax and Semantics: Mistakes, Sins, and Pitfalls
   c) Structure and Style
   d) Emphasis and Direction
   e) Level of Detail
   f) Jargon

4) The Audience and Style—the most commonly overlooked elements of writing
   a) Critically Important Points From Published Works:
(i) **The Elements of Style**, by Strunk and White  
(ii) “Simplicity”, by Zinsser  
(iii) “The Science of Writing Science”, by Gopen and Swan  
(iv) **STYLE toward Grace and Clarity**, by Williams

5) Before You Write  
   a) Analyse Situation and Constraints  
   b) Define the Problem Explicitly  
   c) Generate Ideas  
   d) Plan, Plan, Plan!!  
   e) Organise, Organise, Organise!!  
   f) Identify the Audience  
   g) Work an Outline  
   h) Document your Work  
   i) Evaluate your Work

6) Writing (Drafting)  
   a) Goals and Challenges  
   b) General Methods

7) The Manuscript  
   a) Overall Objectives  
   b) Organisation  
   c) Components  
   d) Am I Done Writing?

8) (Active) Editing—Your MOST IMPORTANT FUNCTION!  
   a) Goal and Challenges  
   b) Pitfalls  
   c) Self-Editing Challenges—“Blind Spots”  
   d) Focused Editing—Interrogating Your Document  
   e) Checklists

9) Pitfalls  
   a) Writers Attitude  
   b) Lack of Sensitivities  
   c) Skipping Steps  
   d) Writing Like You Talk  
   e) Writing for the Writer not the Reader  
   f) Keeping Directed  
   g) Poor Abstracts  
   h) Poor Conclusions  
   i) Poor Figures  
   j) Other

10) Miscellaneous
Learning Level

Fundamental

Course Length

1 Day

Who Should Attend

All Professionals

Special Requirements

There are no special requirements, but recommend a rudimentary understanding of English grammar and a willingness to change or amend your approach to writing, as needed, based on the facets of this course!

CEUs

0.8 CEUs (Continuing Education Units) will be awarded for this 1-day course.

Instructor

Kenneth D. Mahrer, is chief scientist at SIGMA3. His principal function is preparing documentation that builds the full picture of microseismicity and hydraulic fracture stimulations. His career has included a diversity of positions including a member of the team that monitored, mapped, and characterised the microseismicity induced by the world’s deepest, continuous, high-pressure injection well. Prior to SIGMA3, he was a principle geophysicist in the microseismic mapping group at Weatherford.

Mahrer was a technical editor for the Society of Exploration Geophysicists (SEG) for 17 years and has been a technical editor for the Society of Petroleum Engineers (SPE) since 2000. In addition, he is presently an editor for the Hydraulic Fracture Quarterly. He wrote two columns for the SEG journal The Leading Edge, “The Writer’s Block” on improving
technical writing and “Bright Spots” summarising technical articles appearing in the SEG journal *Geophysics*. In addition to teaching short courses on technical writing, Mahrer teaches short courses on microseismicity and hydraulic fracturing. He holds BS and MS degrees in physics, a PhD in geophysics from Stanford University, and two post-doctoral fellowships in fracture mechanics.