

**Short Course 1 – Pulsed Power Engineering**  
**8:00 am – 12:00 pm**  
**\$200**

Course Outline:

1. Introduction
  - a. HV Safety
  - b. Shielding
  - c. Electric Breakdown
2. Energy Storage and Release
  - a. Capacitive
  - b. Inductive
  - c. Inertial/Chemical
3. Pulse Generation
  - a. Pulse Forming Networks
  - b. Pulse Forming Lines
  - c. Voltage Multipliers
4. Diagnostics
  - a. Current Probes
  - b. Voltage Probes
  - c. Fast Imaging
5. High Power Switches
  - a. Spark gap
  - b. Thyatron
  - c. Ignitron
  - d. Thyristor/SCR
  - e. Trigger Schemes
6. Compact Pulsed Power
  - a. Conventional
  - b. Explosive Driven
7. Applications
  - a. Industrial
  - b. Directed Energy
  - c. Biological/Medical
8. Summary/Literature



**Dr. Andreas A. Neuber, P.E.** has been actively conducting research in Europe and the USA primarily focusing on pulsed power related issues and techniques. He has lectured “Pulsed Power” to graduate students over the past decade at Texas Tech University and given numerous pulsed power related lectures at national and international forums. Besides publishing more than 140 journal articles and conference proceedings papers, he has edited and co-authored a book on explosive driven pulsed power. He has further

chaired the technical program of the 2002 Power Modulator Conference and the 2003 Pulsed Power Conference.