

Weibull for the 21st Century

HOSTED BY EMERSON



This three-day workshop covers Weibull engineering analysis of good data, messy data, forecasting, optimum replacements, inspections, grouped data, Weibayes (1-parameter Weibull for better accuracy), test planning, and reliability growth modeling. Training includes hours of hands-on problem solving using SuperSMITH software to analyze example data found in the PlayTIME computer tutorial booklet. Coverage extends to alternate fitting solutions such as maximum likelihood estimation (mle), distribution comparison, system and mixture solutions, confidence, significant differences, and related models. Related models include Crow/AMSAA and special techniques for analyzing warranty format data. Time is allotted for consulting on real data supplied by each student.

All students receive the complete SuperSMITH package with the latest Weibull engineering software and the latest Weibull engineering publications

DAY 1

- Weibull analysis overview
- 23-minute video short course
- How to do a Weibull analysis
- Interpretation of Good Weibulls
- Interpretation of Bad Weibulls
- The risks of extremely small sample analysis
- Suspensions and sample size effects on uncertainty
- Predicting failures with and without renewal
- System models – independent modes
- Case studies
- Weibull experiments
- Introduction to software

DAY 2

- Weibull analysis overview
- 23-minute video short course
- How to do a Weibull analysis
- Interpretation of Good Weibulls
- Interpretation of Bad Weibulls
- The risks of extremely small sample analysis
- Suspensions and sample size effects on uncertainty
- Predicting failures with and without renewal
- System models – independent modes

DAY 3

- Quick review of previous Weibull material
- Confidence explanation and estimation methods
- Are two Weibull data sets significantly different?
- Binomial, poisson, and exponential data
- Kaplan-Meier survival technique for grouped data
- Production process reliability
- Probabilistic analysis
- Summary of batch issue indications
- Crow/AMSAA reliability growth modeling
- Warranty data and analysis
- Lifecycle cost introduction
- Additional PlayTIME computer tutorial work



Instructor

Wes Fulton is founder/CEO of Fulton Findings and the creator of SuperSMITH Weibull, SuperSMITH Visual, and other programs for statistical research such as MonteCarloSMITH and BiWeibullSMITH software packages. He has 16 years' experience as Program Engineer for Garrett AiResearch aerospace systems. He supervised development and production engineering of aircraft flight control projects, and maneuvering fly-by-wire actuation systems. He co-patented a multi-fusible shaft (high-performance drive-train device) and is a member of several engineering societies. A lecturer on statistical modeling, he developed the Fulton Factor used in set comparison, and originated the concept of assurance using equivalent reliability and confidence.

All students receive the complete SuperSMITH package with the latest Weibull engineering software and the latest Weibull engineering publications

Dates: September 3 to 5, 2014

Time: 8:30 AM to 4:30 PM daily

Cost: \$1,800 per person

Location:

Emerson Process Management

Educational Services Center

835 Innovation Drive
Knoxville, TN 37932

To Enroll:

contact Marianne Spence at
(Phone) 800-675-4726
(Fax) 865-218-1764 or
marianne.spence@emerson.com