FEATURED COURSES

• New! Effective Decision Making —A Methodology Approach Seminar—Page 4
• Global 8D—Ford Online Course—Page 7
• Introduction to Advanced Product Quality Planning (APQP) Fast Track—Page 11
• Patent Litigation in the U.S.: What You Need to Know Webinar and Webinar Recording—Page 15
EDUCATION & TRAINING FOR MANAGEMENT AND PRODUCT DEVELOPMENT

Welcome to the Summer issue of the Management and Product Development Education and Training Guide. We have again included ALL the training and education SAE offers related to Management and Product Development — live classroom, live online, and online on demand courses. Training when you want it.

THIS GUIDE INCLUDES COURSES THAT EXPLORE THE FOLLOWING TOPICS:

• The engineer’s role in product liability
• Product compliance programs
• Patent law and patent litigation
• Program and risk management
• Cost and finance principles for engineers

PLUS THE NEW COURSE:
• Effective Decision Making – A Methodology Approach

LIFELONG LEARNING.

SAE International is a global association committed to being the ultimate knowledge source for the mobility engineering professional. By uniting over 135,000 engineers and technical experts, we drive knowledge and expertise across a broad spectrum of industries. We act on two priorities: encouraging a lifetime of learning for mobility engineering professionals and setting the standards for industry engineering.

SAE International is the world’s leader in mobility engineering knowledge. We are trusted by engineers and other professionals around the globe to provide a broad, multi-sector source for information and solutions. The SAE International Professional Development program offers access to over 300 classroom, live online, and online on demand learning opportunities — training that supplies the right content to help solve your specific challenges.

MYLearn.SAE.ORG

Access your SAE education and training transcripts, and plan and schedule future training.
A LEARNING FORMAT TO FIT EVERY NEED

As the world's leader in offering access to the most extensive, multi-sector source of knowledge and expertise, SAE International provides the mobility engineering training and education needed to turn your challenges into solutions.

What is your learning need?
SAE International offers a variety of learning formats to accommodate diverse learning styles. Explore classroom, live and online, and online and on demand courses.

Many courses are offered in multiple formats to fit your exact need. Be sure to watch for the icons that identify the format available for each course.

Seminars or workshops available as similar live, online webinars or online and on demand courses, will feature icons and information about the schedule and fees for all platforms.

CATALOG KEY

You will see the following icons with the course descriptions.

These icons indicate:
• Delivery formats available for the course
• That the course is part of a certificate program

Many courses are available in multiple formats. In addition to finding courses that fit your technology need, look for courses with icons that fit the way you want to learn.

CLASSROOM indicates that course is an instructor-led seminar or workshop offered in a classroom setting

LIVE, ONLINE indicates this course is an instructor-led webinar offered live and online via telephone and internet connection

ONLINE, ON DEMAND These offerings are available online anytime the participant would like to access the course through the internet

CERTIFICATE This icon indicates that this course is part of an SAE International curriculum-based, multi-course certificate.

As an IACET Authorized Provider, SAE International offers CEUs for its programs that qualify under the ANSI/IACET Standard.
We do our best to schedule live learning offerings as far in advance as possible to help you better plan your training needs. The information in this resource guide reflects the most accurate information available at the time of publication. Rarely, unforeseen circumstances may force a change in the live learning schedule. For the most up-to-date listing of scheduled offerings visit training.sae.org/all/bydate. SAE International reserves the right to cancel courses and cannot be held responsible for costs incurred beyond registration fees.

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PROFESSIONAL AND LEGAL ISSUES
MULTI-COURSE CERTIFICATE PROGRAM

This Certificate Program focuses on some of the core legal and risk management issues that are critical for engineers to master in successfully designing and deploying products from a safety and reliability perspective. Courses address patent law, product liability, risk management, and expert witness testimony.

Upon completing each individual course, an SAE Certificate of Achievement is awarded, issuing the designated number of Continuing Education Units (CEUs). Upon completing all four courses, a comprehensive certificate is awarded, recognizing completion of the entire certificate program. The entire four-course program must be completed in five years.

REQUIRED COURSES

• Patent Law for Engineers – see course description on page 14
• Product Liability and the Engineer – see course description on page 6
• The Role of the Expert Witness in Product Liability Litigation – see course description on page 20
• Program and Risk Management – see course description on page 18

Successful completion of a learning assessment is required for each course to gain the CEUs for the course. For more information on the Professional and Legal Issues Certificate Program visit sae.org/certificate/legal_issues.

ENROLL IN THE CERTIFICATE PROGRAM

There is no formal application process; simply begin taking courses at your convenience.

REQUEST OVERALL CERTIFICATE PROGRAM FRAMED CERTIFICATE

When you have completed all courses, please notify SAE Customer Service, 1-877-606-7323 or CustomerService@sae.org. Once your transcript is audited and completion of courses verified, your certificate will be issued.
Effective decision making is critical to maximizing profit/minimizing expenses, return on capital spending, and operational efficiency. To understand the impact of decisions that affect the enterprise, professionals at every level must secure and integrate relevant cross-functional information. Register for this seminar and learn skills needed to base decision making on solid business knowledge and sound financial principles instead of on emotion or “your gut.” The instructor walks you through the tenets of structured decision-making and teaches a step-by-step approach to make practical, effective decisions.

**LEARNING OBJECTIVES**

By attending this seminar, you will be able to:

- Define the decision boundaries and expectations for decision outcomes
- Select the optimal methodology for decision making
- Select the best decision-making criteria in making project decisions and allocating capital budgets
- Determine the lowest enterprise costs in raising capital through debt and equity offerings
- Analyze make-buy, buy-lease, replacement and other alternative enterprise decisions based on the best financial strategies
- Articulate the financial sensitivity of project decisions and the use of decision tools for integrating cross-functional business requirements
- Develop an effective decision-making structure for your unique specific project criteria and your organization

**WHO SHOULD ATTEND**

This seminar will benefit individuals having responsibilities in engineering, business, finance, marketing, purchasing, manufacturing, research, and program management. In addition, local government leaders and individuals in non-profits may benefit from these decision-making case studies in determining business decisions including which projects and grants should be supported. A group from the same organization may find it advantageous to attend together.
CONTENT HIGHLIGHTS

• Decision Boundaries and Expectations
  • Region & Functions Impacted
  • Time Frame of Decision
  • Outcomes
  • Plan B

• Decision-Making Principles
  • Evolution
  • Terminology
  • Types; Stages

• Financial Principles
  • Time Value of Money, Interest & Inflation
  • Worth (Present Value, Future Value, etc.)
  • Financial Decision Methods (NPV, IRR, Payback Period, etc.)

• Decision-Making Criteria
  • Market Demographics
  • Product or Service Position/Leadership, Parity
  • Financials & Price/Margin/Cost Reduction
  • Quality/Customer Satisfaction
  • Change in Business Direction/Vision
  • Personnel/Job Creation

• Cost Impact & Enterprise Decisions
  • Cost of Capital: Equity & Debt, Revenue Sources
  • Cost of Ownership: Depreciation, Accelerated Cost Recovery
  • Influence of Tax Obligations

• Alternative Financial Decisions for the Enterprise (Principles & Case Studies)
  • Make/Buy; Buy/Lease
  • Replace/Repair
  • Investments of Unequal Life

• Sensitivity & Scenario Analysis & Decisions (Case Studies)
• Decision-Making Methodology
  • Matrix Priority Rating System
  • Case Study by Attendees

INSTRUCTOR

James Masiak
Principal of Technology Highway, L3C, Responsible for Technology Development and Commercialization

I.D.# C1354

SCHEDULE
August 13, 2014
Troy, Michigan
December 9, 2014
Troy, Michigan

FEES

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ONE-DAY/.7 CEUS

Get more information and register: training.sae.org/seminars/c1354
In the past few decades, product liability law has dramatically changed the manufacturer’s outlook in the design and manufacture of product. The engineer’s role has shifted to include a safety audit analysis to minimize the existence of a product defect and/or to defend the product in a way that is responsive to the legal concerns. An overnight assignment will be made by the instructor. It will consist of problems drawn from actual cases and a group project that examines the design, instructions, and warnings of a product.

LEARNING OBJECTIVES
By attending this seminar, you will be able to:
• Relate legal concepts as they apply to the manufacturing/design process
• Use safety audit analysis techniques to minimize or eliminate product defects during design, thus reducing product liability
• Discuss defense of product from a legal perspective
• Recognize the importance of potential liability as it relates to the manufacturer

WHO SHOULD ATTEND
Engineers responsible for product design, including managers and designers; corporate risk managers; persons responsible for developing and approving product instructions and warnings. Production and quality assurance managers, personnel responsible for product safety and those who oversee and manage product liability issues will also benefit.

CONTENT HIGHLIGHTS
• Legal Concepts
• Analysis of Defect
• Designing for Reasonable Safety
• The Role of Standards in Design
• Warnings
• Problem Analysis by Participants
• Review of a Product Design by Participants

INSTRUCTOR
Charles F. Seyboldt
Independent Consultant

“AI’s graphic descriptions of real world examples help convey the law of product liability in a manner that is uniquely understood by the engineer.”

Henry Krautner
Manager Design Engineering
Detroit Diesel Corp.

I.D.# 82001

SCHEDULE
July 24-25, 2014
Troy, Michigan

FEES
List: $1,275
Members
Classic: $1,145
Premium: $1,085
Elite: $1,015

1.5 DAYS/1.0 CEUS

Get more information and register: training.sae.org/seminars/82001
Global 8D (G8D) is a disciplined process developed by Ford Motor Company to help product development and manufacturing engineers identify and solve problems. Solving problems results in efficient, as well as effective, resolution to ‘root causes’ of customer satisfaction issues, and helps reduce warranty costs. With this 12-hour online course, you will learn the methods and tools used to complete each step in the Ford Global 8D find-and-fix problem-solving process, including steps to define the problem, verify the root cause and escape point, and prevent occurrence.

LEARNING OBJECTIVES

By connecting with this training program you will be able to:

• Describe each step in the G8D process
• Identify the types of problems best resolved using the G8D problem-solving method
• Participate as an effective G8D team member
• Apply Global 8D problem-solving methods as a G8D team member
• Use G8D process support tools and the G8D web application

IS THIS FORD ONLINE COURSE FOR YOU?

This course is geared toward quality, manufacturing, and product development engineers. It is recommended that you have an engineering degree and experience in the automotive engineering field.

CONTENT HIGHLIGHTS

• Global 8D Overview
• Prepare for Global 8D and Establish the Team
• Describe the Problem and Find the Root Cause
• Choose and Implement a Permanent Corrective Action (PCA)
• Complete the Global 8D

AUTHORS

Ford Quality Office
Ford Learning and Development
CREATING AND MANAGING A PRODUCT COMPLIANCE PROGRAM

Around the world, and more often than not, government bodies require formal certification of products. As product developers expand into new markets, they will be confronted with new standards, regulations, and customer expectations that may require new compliance processes. A properly run compliance program improves your product’s quality and safety, broadens your product’s market, ensures compliance with regulations and laws, and helps provide protection from future product liability issues.

This two-day seminar presents a process development methodology that can be used repeatedly as new compliance requirements emerge. You will learn best practices in creating a compliance program for your products and markets, and how to use this program at all stages of product development and production. Sample spreadsheets will be used to demonstrate tailoring the program to your product, your markets, and your organization. A properly managed compliance program simplifies the certification or approval of your product, and ensures that you regularly apply and document good engineering practices for product safety and reliability.

LEARNING OBJECTIVES

By attending this seminar you will be able to:

• Summarize how a formal compliance program adds value to your goods and services
• Develop a compliance checklist
• Identify effective strategies for researching compliance requirements
• Describe how to manage the ongoing compliance process
• Explain the importance of documenting compliance and retaining records

WHO SHOULD ATTEND

This seminar is designed for managers with implementation authority for product safety and compliance; product development engineers, designers and managers; new business development managers; risk managers and compliance or certification managers.
CONTENT HIGHLIGHTS

• Introduction to Compliance
  • What do we mean by compliance
  • The 3 basic forms of compliance
  • Why we need to show compliance: Legal requirements in different countries; Commercial advantages; Product liability risks
  • What is a formal compliance program
• Creating a compliance checklist - getting started
  • An introduction to the compliance process
• Defining your markets in terms of compliance requirements
  • Finding applicable regulations, standards, and guidelines
  • Documenting best practices in the compliance checklist
  • Extracting relevant requirements from the regulations, standards and guidelines
• Selecting methods of compliance
• Assigning tasks from the checklist
• Sorting and presenting the blank checklist
• Applying the checklist to a development project
  • Introducing the checklist within your organization: Integrating the checklist process into existing policies and procedures; Identifying key players, and getting them on your side
  • When and how to start the product specific checklist
  • Sharing and controlling the checklist
• Managing the compliance program over a product’s life
  • Using the checklist as the product grows and develops
  • How the checklist gives your product a unique identity: Learning from the checklist for your next project; the checklist as “corporate memory”; identifying and retaining best practices beyond minimum compliance requirements
• The standards development process
  • How standards are written
  • How and why to get involved in standards development

INSTRUCTOR

R.W. (Bill) Walker
Owner and Principal Engineer
Walker Technical Services

I.D.# C1213

SCHEDULE
September 11-12, 2014
Troy, Michigan

FEES
List: $1,275
Members
Classic: $1,145
Premium: $1,085
Elite: $1,015

TWO-DAYS/1.3 CEUS

Get more information and register:
training.sae.org/seminars/C1213
The content of this course is based on and is presented from the DoD perspective and serves as the foundation for understanding the regulations and language used in the federal acquisition system. This course introduces the Joint Capabilities Integration and Development System; the planning, programming, budgeting, and execution process; DoD 5000-series policy documents; and current issues in systems acquisition management. Designed for individuals who have little or no experience in DoD acquisition management, this course familiarizes the participant with the terminology and processes used by government agencies and contracting organizations.

LEARNING OBJECTIVES

• Identify the fundamental precepts and basics of Defense Systems Acquisition Management
• Identify the diverse, interrelated, and changing nature in the different disciplines of Defense Systems Acquisition Management
• Identify the regulations and governing structures of Defense Systems Acquisition Management

IS THIS COURSE FOR YOU?

SAE is pleased to offer this course to government contractors and other individuals requiring an understanding of the regulations and language used in the federal acquisition process. Additionally, individuals interested in pursuing acquisition careers with the federal government will benefit from this certified DAU Equivalency course. Successful completion also meets the ACQ101 course requirement for DAWIA Level I Certification.

CONTENT HIGHLIGHTS

• Acquisition Policy and Planning
• Defense Acquisition Workforce Improvement Act (DAWIA)
• Organizations and Acquisition Categories
• Development System (JCIDS)
• Financial and Contract Management
• Cost estimation
• Program/budget execution
• Technical Management
• Process
• Management

AUTHOR

Defense Acquisition University
The Introduction to Advanced Product Quality Planning Fast Track will address an overview of the best practices/methodologies for planning and managing the successful launch of a new product. Participants this course will gain a ‘common-sense’ perspective for successful new product launches and what needs to be done to comply with automotive customer specific requirements. You will also understand how to apply the concepts of “front-end” planning (via the APQP process) that approved will result in continual improvement of products and services for both the customer and the supplying organization.

**LEARNING OBJECTIVES**

By participating in this Fast Track course, you will be able to:

- Explain what APQP is, what the purpose of APQP is, and what the goals are of an effective APQP process
- Identify the impacts and benefits that an effective APQP process has on both the customer and the supplier
- Describe how an APQP process is effectively integrated into the supplier’s business management system
- Compile a ‘Master Plan’ for new product introduction and outline the inputs and outputs of the various phases of an effective APQP process
- Summarize the benefits of an effective APQP process and illustrate how APQP leads to continual improvement for both the customer and supplier

**IS THIS FAST TRACK FOR YOU?**

This course is relevant to individuals with limited or general knowledge of the APQP process and some experience with introducing new products or new manufacturing processes.

**CONTENT HIGHLIGHTS**

- What is APQP?
- What is the purpose of APQP?
- Understanding how APQP integrates into the automotive supply chain
- APQP - A master plan for new product development
- Summary of APQP benefits

**INSTRUCTOR**

Larry Bissell
Independent Consultant
NEW! MILITARY TACTICAL VEHICLE PRODUCT DEVELOPMENT - CONCEPT TO PRODUCTION

Understanding how industry can apply currently available commercial vehicle technologies as a platform to meet current and future DoD needs may become an important factor in reducing costs and conforming to DoD budget constraints.

Understanding the U.S. Department of Defense (DoD) requirements, processes, and product development lifecycle allows for more effective new product engineering and development within the DoD marketplace.

The overall objective of this two day seminar is to establish a working knowledge of the military tactical vehicle product development process. The instructor will provide attendees an in-depth explanation of the DoD product development lifecycle. This will include the product specifications during the infancy stage of development on the government side and continue through the various technical development stages required for the full production launch of various military vehicle platforms, including wheeled and tracked vehicles. This course will give those who are entering the military tactical vehicle market, or those who want to effectively move commercial products into the DoD market the foundation to do so.

LEARNING OBJECTIVES

By attending this seminar, you will be able to:

• Identify the requirements and philosophies of DoD Product Development and Key Metrics for success
• Recognize the roles of contracting, the program office, testing requirements, and the overall acceptance process of militarized products by the DoD
• Evaluate and support product specifications to key metrics (KPP’s) that allow you to successfully meet your end customer’s expectations
• Identify and explain, with a clear understanding, the product development life cycle and the key gates a particular product is required to pass through to be successfully adopted by the DoD
• Identify and associate the similarities and differences between tracked and wheeled vehicles and component level product development and the various paths that can be taken to successfully develop militarized products
WHO SHOULD ATTEND
Program managers and engineers working within or supporting the tactical vehicle market as well as those who are looking to develop a militarized component.

CONTENT HIGHLIGHTS
• Product Development Lifecycles
• Product Specifications
  • Automotive Tank Purchase Description (APTD)
  • Operational Requirements Document (ORD)
  • Technology Readiness Level (TRL)
• Performance vs. Development
• Acceptance
• Input from the customer
• Testing: Laboratory; Finite Element Analysis
• Testing: Aberdeen Test Center; Yuma Proving Grounds; other testing facilities
• Contracting—proposals; Contract Data Requirements List
• Challenges - Trends
• How to successfully tie all elements of contracting, program office and acceptance testing into product development

INSTRUCTOR
Glen Simula
President and CEO of GS Engineering, Inc.

I.D.# C1248

SCHEDULE
October 6-7, 2014
Rosemont, Illinois
Held in conjunction with the SAE 2014 Commercial Vehicle Engineering Congress

FEES
List: $1,265
Members
Classic: $1,135
Premium: $1,075
Elite: $1,005

TWO-DAYS/1.3 CEUS
Get more information and register:
training.sae.org/seminars/C1248

SAVE EVEN MORE ON EDUCATION AND TRAINING FROM SAE
SAE Members - have you already taken a Professional Development course in the last few months? You could qualify for an additional 20% off of a future course.

SAE members who have completed an SAE training in the last 12-months can get an additional 20% off of additional courses if taken in the same 12-month period. Take a seminar in August; get 20% off two more seminars if taken by next August. Take a seminar in June; get 20% off of a seminar and an e-Seminar if taken by the next June. Some courses and learning products are not eligible. Visit training.sae.org/discounts/ to view exclusions and conditions.

Call SAE Customer Service to register and get your discount! 1-877-606-7323 (1-724-776-4970 outside the U.S. & Canada). Please use promo code FREQUENTPD when registering.
PATENT LAW FOR ENGINEERS

This information-packed seminar focuses on the intricacies of patents, patent infringement litigation and patent licensing. Attendees will explore the important subjects of obtaining U.S. and foreign patents, maintaining U.S. and foreign patent rights, enforcing patent rights, defending against patent rights asserted by competitors, and licensing patent rights for revenue. After this seminar, you will effectively understand patents and ways to protect your company’s valuable inventions. Your new knowledge will help your company maintain and enhance its position in the marketplace.

LEARNING OBJECTIVES

By attending this seminar, you will be able to:

• Obtain an overview of U.S. patent litigation
• Understand the basic legal principles for liability and damages in patent cases
• Gain insights into how patent disputes are resolved
• Predict the fees and expenses associated with bringing and/or defending a patent case in the U.S.
• Anticipate the scope of discovery in, and/or business disruption arising from, a U.S. patent case
• Peek into the future of potential patent law reform

WHO SHOULD ATTEND

Participants should have a mid- to upper-level managerial role. Research and development, in-house legal staff members such as in-house lawyers, patent agents, or patent liaisons will especially benefit.

CONTENT HIGHLIGHTS

• Overview of Patent Litigation
• Who Decides Liability and Damages
• How Long Does it Take From Filing to Trial
• How Much Does It Cost
• What is the Scope of Discovery
• What Changes are on the Horizon

INSTRUCTOR

William Cory Spence
Partner, Ungaretti & Harris LLP

“Being an engineer in a research field, this course gave me the information I need to legally understand how and when my research can be disclosed and marketed.”

Charles E. Roberts
Manager
Southwest Research Institute

I.D.# 88007

SCHEDULE
October 8, 2014
Troy, Michigan

FEES
List: $775
Members
Classic: $695
Premium: $655
Elite: $615

ONE-DAY/.7 CEUS

Get more information and register:
training.sae.org/seminars/88007
This webinar will tell you what you need to know about U.S. patent litigation and provides in-depth insights into the practical realities of patent disputes in the U.S. Learn what’s involved in a patent case, including the issues that the patent owner has to prove, e.g. infringement, and the issues the accused infringer has to prove, e.g., invalidity. Increase your awareness of the role of the judge and the jury in patent cases and you hear about the increasing use of alternative dispute resolution mechanisms, such as mediation, to resolve patent disputes. Among other topics, this course increases your appreciation for the time it typically takes to go from the filing of a case to trial, and the fees and expenses associated with the case.

LEARNING OBJECTIVES
By connecting with this webinar, you will be able to:
• Obtain an overview of U.S. patent litigation
• Explain the basic legal principles for liability and damages in patent cases
• Gain insights into how patent disputes are resolved
• Predict the fees and expenses associated with bringing and/or defending a patent case in the U.S.
• Anticipate the scope of discovery in, and/or business disruption arising from, a U.S. patent case
• Peek into the future of potential patent law reform

WHO SHOULD ATTEND
This course is geared toward executives, in-house counsel, in-house patent agents, and senior managers across industries, such as automotive and aerospace. Anyone who needs help in understanding what to expect should they become involved in U.S. patent litigation - both U.S. and non-U.S. participants are encouraged to attend.

CONTENT HIGHLIGHTS
• Overview of Patent Litigation
• What is the Scope of Discovery?
• Who Decides Liability and Damages?
• How Long Does it Take from Filing to Trial?
• How Much Does it Cost?
• What Changes are on the Horizon?

INSTRUCTOR
William Cory Spence
Partner, Ungaretti & Harris LLP

“I get what you need to know in a format that works very well.”
J. O. Burke
Vice President
Kold Ban International
In today’s corporate environment of shrinking budgets, required structural cost reductions, sharing of global designs/services, and pricing pressures, it is critical that engineers possess a working knowledge of engineering economics principles. To fully understand the economic viability of engineering decisions, engineers need to find the appropriate balance between design alternatives, resulting costs, and impact on their enterprise. This seminar introduces participants to the cost, finance and economic concepts and their applications to products and services. This three-day course provides you with practical information normally obtained through university level economics and business management courses and will help you to maximize efficiencies from both an engineering and business perspective.

**LEARNING OBJECTIVES**

By attending this seminar, you will be able to:

- Understand the hierarchy of economics, finance and cost in making financial decisions
- Review financial statements and ratios in assessing the financial state of a business
- Select the best decision-making criteria in making project decisions and allocating capital
- Implement a benchmarking plan to establish a competitive market position
- Determine the enterprise costs of raising capital through debt and equity offerings
- Analyze make-buy and buy-lease options and other alternative decisions based on the best financial strategies
- Understand the financial sensitivity of project decisions and the use of decision tools for integrating business requirements
- Determine and optimize all costs in the production process
- Select the optimum cost accounting strategy and inventory plan
- Identify the appropriate cost estimation methodology for metallic, electronic & plastic components
- Select cost control alternatives from marketing, engineering, commercial & geographic options

**PRINCIPLES OF COST AND FINANCE FOR ENGINEERS**

To fully understand the economic viability of engineering decisions, engineers need to find the appropriate balance between design alternatives, resulting costs, and impact on their enterprise.
WHO SHOULD ATTEND
This seminar will benefit engineers having responsibilities in manufacturing, maintenance, research, design, product and process development, program and project management, troubleshooting, and materials management.

CONTENT HIGHLIGHTS
• Process & Responsibility for Determining Cost
• Economics, Finance & Cost Principles
• Finance
• Time Value of Money and Decision Making
• Decision Making
• Benchmarking Module
• Cost Impact on the Enterprise
• Alternative Financial Decisions Using Case Analysis
• Sensitivity & Scenario Analysis
• Matrix Priority Rating Systems
• Production Cost Relationships
• Elements of the Production Process
• Cost Principles & Definition
• Managerial & Cost Accounting
• Inventory Management
• Cost Estimating Methodology
• Cost Control Alternatives

INSTRUCTOR
James Masiak
Principal of Technology Highway, L3C,
Responsible for Technology Development and Commercialization

I.D.# C0828
SCHEDULE
July 28-30, 2014
Troy, Michigan
November 12-14, 2014
Troy, Michigan

FEES
List: $1,645
Members
Classic: $1,475
Premium: $1,385
Elite: $1,305

THREE-DAYS/2.0 CEUS
Get more information and register: training.sae.org/seminars/C0828

CUSTOMIZE A LEARNING EXPERIENCE TO ADDRESS YOUR SPECIFIC BUSINESS NEEDS.
Corporate Learning Solutions from SAE International brings training seminars to your location, adding a customized approach to address your specific business needs.
1-724-772-8529 • training.sae.org/corplearning
This course presents a proven eight-step method for program planning and control, including: definition of customers’ requirements, roles of the program team, determination and flowcharting of program tasks, scheduling and costing, quality aspects of critical tasks, and risk management.

With shortened development cycles and greater reliance on information in programs, this course emphasizes the value of communication within a program team, between the team and functional areas, and between the team and the program customer. Since the appropriateness of communication vehicles vary depending on purpose and audience, alternative modes of communication and change control are discussed.

LEARNING OBJECTIVES
By attending this seminar, you will be able to:

• Explain the eight-step method for program planning and control
• Implement the eight-step method to improve program outcomes as measured by cost, schedule and quality
• Make plans and progress visible to team members and to the program customer

WHO SHOULD ATTEND
Engineers and business people involved in various product development team activities will find the subject matter practical and useful. The content is of particular value to professionals from engineering, manufacturing, purchasing, quality, marketing, and finance functions in ground vehicle OEMs and suppliers.

CONTENT HIGHLIGHTS
• Program and risk management overview
• Defining program outcomes and measurables
• Team formation and task planning
• Scheduling work
• Resource planning
• Risk Management
• Optimizing work performance
• Project initiation
• Tracking program performance

INSTRUCTOR
Murray Sittsamer
Founder, Luminous Group

“The clarity and thoroughness of the subject was excellent. The instructor made it relevant and timely to our company’s efforts.”

William Sacherek
Benchmarking Manager
The Boeing Company

I.D.# C0409
SCHEDULE
June 9-10, 2014
Troy, Michigan

FEES
List: $1,315
Members
Classic: $1,185
Premium: $1,115
Elite: $1,055

TWO-DAYS/1.3 CEUS

Get more information and register: training.sae.org/seminars/C0409
This seminar teaches teams how to use the methods and tools of Root Cause Problem Solving to first view problems as opportunities for improvement, identify root causes, and implement solutions to prevent recurrence. Benefits include improved quality and customer satisfaction, reduced operation costs, and greater employee knowledge of work processes. This proven 8-step approach to problem solving will help improve operational and financial performance by identifying causes and implementing solutions to significant or recurring problems. This approach to problem solving is used by many major automotive manufacturers.

LEARNING OBJECTIVES
By connecting with this webinar, you will be able to:
• Describe the 8-Step Problem Solving Methodology
• Define the difference between Symptom and Root Cause
• Use tools and techniques to solve problems
• Evaluate effectiveness of problems solving efforts
• Describe the role of problem solving in continuous improvement
• Write an action plan to apply problem solving to a specific concern

WHO SHOULD ATTEND
This course is applicable to those directly working in or responsible for performance improvement of any definable, repetitive process, e.g. manufacturing, design, logistics, purchasing, sales, or distribution.

CONTENT HIGHLIGHTS
• What is a problem?
• Step 1: See the Problem as an Opportunity
• Step 2: Describe the Problem
• Step 3: Implement Containment
• Step 4: Recognize Potential Root Causes
• Step 5: Design Solution
• Step 6: Implement Permanent Corrective Actions
• Step 7: Prevent Recurrence
• Step 8: Recognize Efforts
• Sufficiency checklist for effective problem solving

INSTRUCTOR
Murray Sittsamer
Founder, Luminous Group

So often problems are solved with ‘band-aids’ and not root cause solutions. This approach is getting too expensive and at best only helps companies tread water.
According to the Federal Rules of Evidence, an expert witness is anyone who can assist the trier of fact (the jury) in understanding any issue in dispute at trial. The witness’ ability to give this assistance can be derived from any specialized training, education, background, or experience. To be effective in providing this assistance, however, requires that the expert witness understand the true role that he or she is to play both before and at the trial.

This seminar will address the critical issues that every person who may be, has been, or is, an expert witness must understand to assist both the attorney and the product manufacturer, regardless of which side the expert serves.

**LEARNING OBJECTIVES**

By attending this seminar, you will be able to:

- Employ the risk/utility balancing process necessary for effectively addressing the issue of design defect
- Recognize the critical elements that govern the interaction between human behavior and product behavior
- Apply the technical/legal elements that will enhance your effectiveness as an expert witness

**WHO SHOULD ATTEND**

This seminar is intended for anyone who is or may become an expert witness in product liability litigation. In addition, insurers, risk managers, corporate product safety personnel, attorneys and those who manage product liability litigation will benefit from insight into selecting and using expert services and witnesses more effectively and efficiently.

“..."I think this course should be attended by all engineering managers and their bosses. It is critical that they understand these aspects of the legal system.”

**F.C. Kucklick**
President
F.C. Kucklick, Inc.
CONTENT HIGHLIGHTS

• The Legal Framework of Negligence and Strict Liability
• The Relationship Between the Attorney and the Potential Expert Witness
• Investigation of an Accident Years After an Occurrence
• Developing the Background Necessary to Understand the Product and its Environment
• Understanding How to Alleged or Refute the Existence of a Product Defect
• Analyzing the Role of Human Behavior and its Relationship to the Cause of an Accident
• Guidelines for Effective Presentation Before Trial and on the Witness Stand
• The seminar includes overnight problem assignments and a demonstration of direct and cross-examination of an expert witness.

INSTRUCTOR

Charles F. Seyboldt
Independent Consultant

I.D.# 92054

SCHEDULE
November 17-18, 2014
Troy, Michigan

FEES
List: $1,275
Members
Classic: $1,145
Premium: $1,085
Elite: $1,015

1.5 DAYS/1.0 CEUS

Get more information and register: training.sae.org/seminars/92054

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Greer, South Carolina – BMW Performance Center
May 19-21  Applied Vehicle Dynamics -- I.D.# C0414

Charlotte, North Carolina – Charlotte/Mecklenburg Police Training Academy
May 13-16  Accessing and Interpreting Heavy Vehicle Event Data Recorders -- I.D.# C1022

Troy, Michigan – SAE International Office
May 13-14  Introduction to Failure Mode and Effects Analysis for Product and Process -- I.D.# C1201
May 15-16  Sound Package Materials for Vehicle Noise Control -- I.D.# 92032
May 19-20  In-Vehicle Networking with LIN and FlexRay Applications -- I.D.# C0136
May 19-21  Gasoline Direct Injection (GDI) Engines -- I.D.# C1009
May 19-21  Fundamentals of Heavy Truck Dynamics -- I.D.# C0837
May 21-22  Introduction to Welded Joints -- I.D.# C1343
May 28-30  Applying Automotive EDR Data to Traffic Crash Reconstruction -- I.D.# C1210
May 28-30  Advanced Vehicle Dynamics for Passenger Cars and Light Trucks -- I.D.# C0415

Troy, Michigan – SAE International Office
May 12-16  Engineering Management Academy

Warrendale, Pennsylvania – SAE International Office
May 20-21  Understanding the FAA Aircraft Certification Process -- I.D.# C0821
May 22-23  Aircraft Cabin Safety and Interior Crashworthiness -- I.D.# C0926

Webinar – Live Online
May 5-9   Accelerated Concept to Product (ACP) Process using a 3G Design Approach Webinar I.D.# WB1403
May 6-8   Plug-In Vehicle Conductive Charging, SAE J1772 Explained Webinar -- I.D.# WB1046
May 7-16  Tolerance Stack-up Fundamentals Webinar -- I.D.# C0842
May 13   Introduction to Hybrid Powertrains Webinar -- I.D.# C0903
May 15   Basic Hybrid and Electric Vehicle Safety Webinar -- I.D.# C0904
May 20   Plug-in Hybrids: Opportunities and Challenges Webinar -- I.D.# C0905
May 21-30 Root Cause Problem Solving: Methods and Tools Webinar -- I.D.# WB0931
May 22   Hybrid and Electric Vehicles: Current Production, Future Strategies Webinar -- I.D.# C0906

McLean, Virginia – LMI
Jun 3-4   Damage Tolerance for Gas Turbine Engines -- I.D.# C1323
Jun 5-6   Understanding the FAA Parts Manufacturer Approval Process -- I.D.# C1324

Norwalk, California – Cerritos, College (SCCT)
Jun 9   AS5553 and Counterfeit Electronic Parts Avoidance -- I.D.# C1302
Jun 9-10  Design for Manufacturing & Assembly (DFM/DFA) -- I.D.# 92047
Jun 10-11 Implementation of SAE AS6081- Counterfeit Electronic Parts Avoidance for Distributors -- I.D.# C1135
Jun 11-12 Understanding and Supporting Aircraft Accident Investigation and Reconstruction -- I.D.# C1143

Troy, Michigan – SAE International Office
Jun 2-6   Diesel Engine Technology Engineering Academy -- I.D.# ACAD03
Jun 2   Introduction to NVH Aspects of Hybrid and Electric Vehicles -- I.D.# C1128
Jun 2-3   Control Systems Simplified -- I.D.# C0525
Jun 5-6   Vehicle Frontal Crash Occupant Safety and CAE -- I.D.# C0621
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<td>Commercial Vehicle Braking Systems -- I.D.# C0233</td>
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Sep 8-17  Implementing SAE AS6081 – Counterfeit Electronic Parts Avoidance for Distributors Webinar – I.D. #WB1355
Sep 10-19  Vehicle Sound Package Materials Webinar -- I.D. # WB1204
Sep 16  Introduction to Hybrid Powertrains Webinar -- I.D. # C0903
Sep 18  Basic Hybrid and Electric Vehicle Safety Webinar -- I.D. # C0904
Sep 23-25  Introduction to Powertrain Calibration Engineering Webinar – I.D. # WB1346
Sep 30-Oct 2  Driver Distraction from Electronic Devices: Insights and Implications Webinar -- I.D. # WB1140

Anaheim, California – held in conjunction with the SAE 2014 On Board Diagnostics Symposium

Sep 8  Emissions-Related OBD Systems: A Design Overview – I.D. #C0708

Norwalk, California – Cerritos, College (SCCT)

Oct 27-28  Damage Tolerance for Gas Turbine Engines -- I.D. # C1323
Oct 27-29  Applying Automotive EDR Data to Traffic Crash Reconstruction -- I.D. # C1210
Oct 29-30  Understanding the FAA Parts Manufacturer Approval Process -- I.D. # C1324

Troy, Michigan – SAE International Office

Oct 1-2  Advanced Diesel Particulate Filtration Systems -- I.D. # C0502
Oct 2-3  Design of Experiments for Engineers -- I.D. # C0406
Oct 3  Exhaust Flow Performance and Pressure Drop of Exhaust Components and Systems -- I.D. # C0235
Oct 7  Introduction to Gears--I.D. # C0822
Oct 8  Patent Law for Engineers -- I.D. # 88007
Oct 8-10  Internal Combustion Systems: HCCI, DoD, VCT/VVT, DI and VCR -- I.D. # C0613
Oct 9-10  Corrosion Engineering and Prevention -- I.D. # C1217
Oct 9-10  Side Impact Occupant Safety and CAE -- I.D. # C0717
Oct 13-17  Engineering Management Academy
Oct 14-15  Embedded Control Systems Design Workshop -- I.D. # C0922
Oct 15-17  Injuries, Anatomy, Biomechanics & Federal Regulation -- I.D. # 85049
Oct 16-17  Powertrain Selection for Fuel Economy and Acceleration Performance -- I.D. # C0243
Oct 20-21  Tolerance Stack-Up Analysis -- I.D. # C0022
Oct 20-22  Vehicle Dynamics for Passenger Cars and Light Trucks -- I.D. # 99020
Oct 23-24  Acquiring and Analyzing Data from Sensors and In-Vehicle Networks -- I.D. # C0522
Oct 29-31  Advanced Vehicle Dynamics for Passenger Cars and Light Trucks -- I.D. # C0415
Oct 27-31  Vehicle Noise Control Engineering Academy – Powertrain Track
Oct 27-31  Vehicle Noise Control Engineering Academy – Interior Noise

Oxnard, California – Ventura County Fire Department

Oct 21-24  Accessing and Interpreting Heavy Vehicle Event Data Recorders -- I.D. # C1022

Webinar – Live Online

Oct 8  Advanced GD&T Competencies: Datum Usage Webinar -- I.D. # WB1319
Oct 10  Advanced GD&T Competencies: Profile of a Surface Webinar -- I.D. # WB1320
Oct 14-23  Root Cause Problem Solving: Methods and Tools Webinar -- I.D. # WB0931
Oct 15  Advanced GD&T Competencies: Composite Positioning Webinar -- I.D. # WB1321
Oct 20-31  Introduction to Commercial and Off-Road Vehicle Cooling Airflow Systems Webinar -- I.D. # WB1240
Oct 28-Nov 6  Tolerance Stack-up Fundamentals Webinar -- I.D. # C0842
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