Course Title: Engineering Project Management

Course Length: 2 days, in-person

Time in Class per day (hours): 8 hours of in-person instruction

Delivery Options: Company site or at provider

Class Size: Minimum 6 / Maximum 12

Price Per Student: $1,010.00

Location: Wayne County *or* Oakland County

****Attendee must bring laptop for this course****

Course Description:

Project Management and Advanced Product Quality Planning (APQP) are two critical techniques used in product development in the mobility industry today. This seminar will bring these techniques together in an easy to understand format that goes beyond the typical concept of constructing timelines and project planning, by exploring not only the AIAG APQP process, but also specific aspects of PM processes. Students will gain a solid foundation in the essential principles of Project Management and APQP.

Students will immediately apply learned skills by taking a sample project through all phases of the Project Plan using actual industry documents. Realistic issues, problems and time constraints are introduced throughout the exercise to stimulate actual project concerns. Each workshop exercise uses documents specific to the particular area of study such as Statement of Requirements and Statement of Work, Timeline Development and reacting to changing situations such as time crash. Discussion of the major milestones of typical OEM APQP processes, to include PPAP. The workshop is structured so that students must operate in teams and the time constraints allow students to see firsthand the effects of improper delegation of work assignments.

Attendees will receive a copy of the book, *"PMBOK ® " - Project Management Body of Knowledge* (5th edition) by the Project Management Institute (PMI).

Course Learning Objectives:

Upon completion of this course participants will be able to:

- Define the importance of each of the ten (10) Bodies of Project Management Knowledge and the essential components of APQP by Phase (includes the newest Knowledge Area – Stakeholder Management)
- Recognize the minimum essential elements of a Robust Project Plan

- Properly evaluate and differentiate between Statement of Requirement, Statement of Work and Work Breakdown structures
- Apply the different timeline methodologies: Milestone, Gantt, Network (PERT) and Critical Path
- Utilize different types of meeting and conflict resolution strategies, formulate an effective meeting summary and action list, and conduct an actual Design Review
- Recognize the pitfalls common to most mobility projects due to Voice of the Customer (VOC) collection, current U.S. and international legislation and directives, improper application of limited resources, and others
- Beyond the Checklist! - Advanced techniques for Risk Management

Who Should Attend:

New Project Managers, Lead or Design Release Engineers, Project Managers requiring refresher training or desire to learn how to properly apply more advanced project management techniques. other individuals involved with projects will benefit by attending. The course is best suited for individuals in any of the mobility industry sectors such as automotive, truck, recreational, farming, and mining, to include DOD mobility contracts.

Attendees should be familiar with how projects are currently managed in their company so they may ask questions relating to their specific problem areas.

Course Content/Syllabus:

- The Project Management Process
  - Definition, outline and overview of the differences between 4th and 5th editions
  - Project constraints
  - The ten (10) bodies of Project Management Knowledge
  - Project Management and ISO
- Project Plan Life Cycle
  - Three types of life cycles: Product, Project, Project Management
  - Comparison of project management and the automotive APQP process
  - Major elements of each APQP phase
- Project Management Techniques
  - Principles of Integration Management
  - Managing project Stakeholders and Sponsors
  - Defining, constructing, and recognizing the differences between Letter of Intent, Statement of Requirements, Statement of Work and Work Breakdown structures
  - Developing scope of work for conceptual-based (R&D) customers
  - The various types of Work Breakdown Structures (WBS) and a guide to WBS development
  - Beyond lessons learned - Project Best Practices and the TGR/TGW database
  - Documentation requirements necessary to support the PM/APQP/PPAP processes

- Resource Planning
    - Choosing an organizational structure to support effective Project Management
    - Roles and responsibility matrix (RASIC)
    - Tangible versus Intangible resources
    - Developing and managing an effective Staffing and Resource Plan
    - Surviving as the "multi-hatted" project leader
    - Special considerations for small projects
- Sequence Planning
    - Milestone Charts
    - Gantt Charts
    - Network Diagrams and Critical Path Method (CPM)
    - Understanding and applying float/slack time
    - Techniques to address Fast Tracking and Crashing
- Project Costing and Tracking
    - Project cost analysis methods and estimating methods
    - Recognizing and dealing with Scope Creep
    - Control techniques -- Requirements for an effective Change Management System; Negotiating the difference between Phase and Design Reviews; Earned Value Analysis (EVA); Effective meeting techniques; Forming and leading project teams; Structure of effective Phase and Design Reviews; Recognizing and resolving internal and external conflict
- Project Risk Management
    - Components and construction of an effective Risk Management Plan
    - Addressing product liability using the FMEA and HAZOP
    - Risk qualification quantification techniques -- Developing effective checklists; Risk Register/Quadrant Mapping; Expected Values Matrix; Probability and Impact Matrix
- Procurement Management
    - Understanding partner supplier relationships

- Suppliers rating techniques

MAGMA short courses are held on a rolling basis, based on industry demand. Please complete this **short form** to express interest for yourself, or your organization.