

A-Z of Project Management

A Live Course on Proven Project Management Best Practices for Engineers, Managers and other Professionals

Credit: 7.5 PDH's (1 -Days); 0.75 CEU's

Lead Instructor: Bobby Rauf, PE, CEM, MBA

Brief Program Description and Objectives:

This course caters to Engineers, Facilities Managers, Construction Supervisors, Energy Professionals, and Technicians, who are directly or indirectly responsible for operation of manufacturing and institutional facilities, safe execution or completion of projects - projects involving construction, start-up and commissioning of manufacturing, commercial, and institutional facilities. In this program, the instructor shares proven best practices in the field of project management; learnt, vetted and proven over 34 years of project and program management experience in diverse industrial settings. Through this course, participants will be exposed to the A – Z of project management. The program begins with the formulation, vetting and acceptance of the project objective and takes the audience all the way to commissioning and project closure stage - navigating through all phases of project implementation or execution. All phases of typical large project – with budgets exceeding 0.5 million dollars, and schedules extending over multiple months - are outlined below. In addition to being introduced to commercially available project management programs/tools, participants will get the opportunity to learn lessons that are seldom covered in textbooks and are often acquired through experience. The program is designed to be interactive where audience is encouraged to participate and share their experiences, challenges, failures and successes; this enriches the audience's learning.

Topics to be covered:

1. Project Objective, Scope, Basic Assumptions and Goal Setting
2. Project life cycle cost and basic financial analysis
3. Project Screening/Vetting
4. Project team organization, management approval and protocol for communications and transactions
5. Phased Implementation of Long Multi-Segmented Projects
6. Development of functional specifications of the system or process
7. Project Management Tools

- a. Project Schedule development
- b. Project Mapping and Flow
8. Project Performance Metrics
9. Construction and Project Implementation Phase Best Practices
 - a. 5-P, 5-S and 5-C Processes
 - b. Safety in Construction Phase
 - c. PPE, Fire Protection, Elevated Work, SPCC, RCRA, Arc Flash, LOTO, Emergency Action Plan
 - d. Importance of Interpersonal Skills, Clear Communication and Clarification of Expectations on Projects
 - e. Professionalism, Workplace Harassment, Morale and Positive Reinforcement on Projects
10. Factory Testing – AKA: Factory Acceptance Test.
11. Receive equipment, material, tools, equipment and supplies for the installation phase.
12. Pre-mobilization Transfer of Drawings, Technical Data and Important Safety Information.
13. Required training of installation crew and necessary communications to all concerned
 - a. Meetings and documentation
14. On-site System Testing
15. Project Start-up, Commissioning and Closure

Learning Objectives & Take-Aways – After Attending this Course:

1. You will know how to clarify project objective, and how to develop project scope. You will know the value and importance of a succinct set of project basic assumptions. You will know how to develop clear, objective and actionable project goals.
2. You will know how to perform screening and vetting of project objectives and goals if they are predefined for you.

3. You will know how to develop project life cycle cost and how to perform basic financial analysis.
4. You will have better appreciation of project team organization and effective protocol for communications and transactions with internal and external “customers” and team members.
5. You will be able to develop functional specifications of the overall project, system or subsystems.
6. You become aware of essential comprehensive project mapping and project flow.
7. You will know the mainstream project performance metrics that, ultimately, gage *your* success in the implementation of the project.
8. You will know important construction and project implementation phase best practices.
9. You will appreciate the importance of interpersonal skills, clear communication and clarification of expectations on projects.
10. You will know the gravity of workplace harassment, team morale and positive reinforcement.
11. You will know what factory testing and on-site testing entails.
12. You will know the importance of receiving and securing equipment, material, tools, equipment and supplies for the installation phase.
13. You will know how to ensure successful and effective project start-up, commissioning and closure

Who should attend:

- Engineers of all disciplines
- Licensed Professional Engineers, who need to meet the annual or biennial license renewal PDH (Professional Development Hour) or CEU (Continuing Education Units) requirements.
- Engineering Managers/Directors
- Current or aspiring Project Managers
- Facilities Managers
- Energy Professionals
- Project Planners and Purchasing/Procurement Professionals

- Construction Supervisors or Construction Site Superintendents
- Constructions Company Managers/Executives
- Project/Constructions Safety Supervisors
- Technicians with Project Phase Responsibility
- Other professionals whose annual PLP, Performance and Learning Program, includes acquisition of effective project management knowledge.

Instructor Bio:

Professor S. Bobby Rauf, P.E, C.E.M, MBA; member, ASEE, American Society of Engineering Education.

Bobby Rauf is the President, Chief Consultant and a Senior Instructor at Sem-Train, LLC. Bobby has over 25 years of experience in teaching undergraduate and post-graduate Engineering, Math, Business Administration and MBA courses, seminars and workshops. Professor Rauf is registered (PE) **Professional Engineer**, in the State of North Carolina and is a **Certified Energy Manager**.

Mr. Rauf was inducted as “**Legend in Energy**” by AEE, in 2014. He is a published author of multiple engineering and energy books and professional development courses. He holds a patent in process controls technology.

Professor Rauf is certified to instruct various engineering, ergonomics, and industrial safety courses. He has conducted certification training and trained engineers for Professional Engineering licensure exams in the United States, The United Kingdom, Kingdom of Saudi Arabia, The Netherlands and Ukraine, over the past ten years.

Mr. Rauf develops and instructs PDH (Professional Development Hour) and, continuing education, engineering skill building courses. He conducts these courses in form of webinars, live on-site presentations, workshops, pre-recorded audio and self-study texts. Some his major clients include **Texas A&M University, Saudi Aramco – KSA, University of North Carolina at Charlotte, McNeese University, Lamar University, Clemson University, Association of Energy Engineers, EPIC College - Canada; US Bureau of Reclamation, BHP Billiton, PDH Engineers, CED, and PDH Source**. He is also an Adjunct Professor at Gardner-Webb University.

Professor Rauf has also developed and published several self-study books that cater to the continuous professional development needs of Engineers, Technicians and Technical Managers.

Mr. Rauf’s last full-time engineering employment, in the corporate world, was at PPG Industries, Inc. where he served as a **Senior Staff Engineer**. During his long career at PPG, his responsibilities included development and management of energy and ergonomics programs for multiple manufacturing plants, in the US and overseas. He also provided consultation and training services in, energy, electrical engineering, industrial

safety, ergonomics and arc flash arena. His extensive engineering experience includes, power design, control system design, project management, process management, energy and utilities management, energy audits/assessments, plant maintenance, robotics, manufacturing automation, HVAC audits, and design of ergonomic equipment.

Professor Rauf's publications include (Available through AEE, Amazon.com, and Barnes and Noble):

- 1) Text book titled **“Electrical Engineering for Non-Electrical Engineering,”** The Second Edition of this book was published in 2016 through Fairmont Press and CRC Press – Worldwide distribution.
- 2) Text book titled **“Thermodynamics Made Simple for Energy Engineers,”** Published in 2012 through Fairmont Press and CRC Press – Worldwide distribution.
- 3) Text book titled **“Finance and Accounting for Energy Engineers,”** Published in 2011 through Fairmont Press and CRC Press – Worldwide distribution.

Mr. Rauf of Sem-Train has provided training and/or consulting services to the following organizations over the last fifteen years:

1. **BHP Billiton**
2. **Saudi Aramco (Dammam, Kingdom of Saudi Arabia)**
3. **US Bureau of Reclamation (Hoover Dam)**
4. **CED**
5. **Balfour Beatty**
6. **Shaw Group**
7. **McNeese University**
8. **University of North Carolina, Charlotte**
9. **Texas A&M University,**
10. **Clemson University,**
11. **N.C. State University**
12. **PPG Industries, Inc.,**
13. **NEG**
14. **PDHengineer,**
15. **PPI, Professional Publications**
16. **University of Maryland Baltimore County,**
17. **EPIC (Canada)**
18. **Y-F Asia - Singapore**

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and FBPE, Florida Board of Professional Engineers, for the provision of CPC, Continuing Professional Competency, courses.”

“SemTrain, LLC, is approved for US Federal Government Contract Work, and is SAM and CAGE registered.

Testimonials from clients:

- 1) Timothy M., CEM, CDSM: “Bobby: I wanted to pass on my thoughts concerning the recently completed, Electrical Engineering for Non-Electrical Engineers. I found it to be very helpful, especially the section on Power Factor. I have had it explained to me a number of times, but your explanation was the best.
- 2) Kimberly T., 2011: Bobby, I would like to say that even though I am not an engineer, I am really glad that I took this class (EE for Non-EE). You have helped me to dissect and visualize some of the terms and concepts that were not tangible to me prior to this class.
- 3) Gregory (Greg) V. D., P.E.: “Hi Bobby, I've enjoyed both of your pdhengineer.com webinars that I've attended.....I don't know how you get through a full 8 hours at such a high energy level!”
- 4) Dr. A. P., Professor and Dean, 2013: “Dear Bobby, it was such a pleasure to meet you and having you as the great instructor of our Electrical Engineering seminar. As I understood from the attendees they really enjoyed your course and learned a lot...”

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