

Faculty and Credit Information

Presented by Shahid “Bobby” Rauf, P.E, C.E.M, C.M.T, MBA

Mr. Bobby Rauf is the president, chief consultant and a senior instructor at Sem-Train, LLC. Professor Rauf has over 25 years of experience in teaching undergraduate and post-graduate engineering, science, math, business administration and MBA courses, seminars, and workshops. Mr. Rauf earned his BS degree in Electrical Engineering, with honors, from NC State University, Raleigh. He earned his Executive MBA degree from Pfeiffer University Misenheimer, North Carolina. He is a registered professional engineer in the States of Virginia, Wyoming, and North Carolina and is a certified energy manager. He holds a patent in process controls technology. 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. In 2014 Mr. Rauf was inducted as a “Legend in Energy” by AEE. Mr. Rauf is a member of ASEE, American Society of Engineering Education. Mr. Rauf has developed and instructed professional engineering and fundamentals of engineering exam (NCEES) prep courses over the past 20 years. Mr. Rauf develops and instructs PDH (Professional Development Hour) and continuing education, engineering skill building seminars and courses. See testimonials from past attendees at www.sem-train.com. He is also an adjunct professor at Gardner-Webb University. Mr. Rauf has published multiple texts over the last ten years. He also provides text editorial services to River Publishers.

Credit Information

This webinar is open to the public and is designed to qualify for 7.0 PDHs for professional engineers in most states that allow this learning method. Please refer to specific state rules to determine eligibility.

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The Practicing Institute of Engineering has approved this course for 7.0 PDHs in the field of professional engineering.

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Engineering Projects from Start to Finish

Live, Interactive Webinar - Friday, October 20, 2023

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Learning Objectives

You’ll be able to:

- Define** and **agree** to project goals.
- Analyze** project initial cost as well as lifecycle cost.
- Assemble** project teams and establish communication protocols.
- Explore** phased implementation of long multi-segmented projects.
- Discuss** project performance metrics.
- Examine** project management best practices, including safety procedures.
- Wind** up projects with training, testing and commissioning.



HalfMoon Education Live Webinars

Engineering Projects from Start to Finish

Live, Interactive Webinar - Friday, October 20, 2023



- Define** project objectives and scope
- Explore** project life cycle cost and return on investment
- Assemble** a project team, and provide consistent communication
- Use** effective project management tools for budgeting, scheduling and reporting
- Discuss** project performance metrics
- Review** construction and project implementation best practices

Continuing Education Credits

Professional Engineers
7.0 PDHs



Webinar Information

Log into Webinar 8:00 - 8:30 am CDT	Break 12:00 - 12:30 pm CDT
Morning Session 8:30 am - 12:00 pm CDT	Afternoon Session 12:30 - 4:30 pm CDT

Tuition
\$319 for individual registration.
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Agenda

- Project Objective, Scope, and Basic Assumptions**
 - Defining and agreeing to project objectives
 - S.M.A.R.T. goals
 - S.W.O.T. analysis
- Project Life Cycle Cost and Basic Financial Analysis**
 - Initial cost
 - Life cycle cost
 - Payback period
 - Return on Investment (ROI), Rate of Return (ROR), Return on Equity (ROE), Internal Rate of Return (IRR)
 - Financial analysis case study
- Project Screening/Vetting**
- Project Team Organization, Transactional Protocols, and Approvals**
 - Formation
 - Qualifications and appointment of project manager
 - Selection, nomination and approval of team members
 - Protocols associated with project implementation
 - P.R.I.D.E.
- Phased Implementation of Long Multi-Segmented Projects**
- Development of Functional Specifications of the System or Process**
- Project Management Tools**
 - Project schedule development, mapping and flow
 - Gantt charts
 - Reporting
 - Digital collaboration
 - Key Performance Indicators (KPI)
- Project Performance Metrics**
 - Earned value management (EVM) and three basic elements
 - Planned value (PV), actual cost (AC), and earned value (EV)
 - Calculating various performance metrics
 - Schedule variance (SV)
 - Schedule performance index (SPI)

- Construction and Project Implementation Phase Best Practices**
 - 5-S and 5-C processes
 - Safety during construction phase
 - Safety risk assessment and risk factor (RF)
 - Safety and elevated work
 - Personal protective equipment (PPE)
 - Arc flash hazard
 - Spill prevention, control and countermeasures (SPCC)
 - Hazardous waste (RCRA)
 - Lock out tag out (LOTO)
 - Importance of interpersonal skills, clear communication and clarification of expectations
 - Professionalism, workplace harassment, morale, and positive reinforcement on projects
- Factory Testing**
 - Factory testing facts, attributes, and best practices
- Receive Equipment, Materials, Tools and Supplies for the Installation Phase**
 - Project storage building (PSB)
 - Capacity, infrastructure, practices, and security
- Pre-Mobilization Transfer of Drawings, Technical Data and Important Safety Information**
 - Objective, mode, and attendance
- Required Training of Installation Crew and Necessary Communications to All Concerned**
 - Training
 - Sign-off requirements and documentation
 - Vital project communications
- On-site System Testing**
 - Objective, scope, and attributes
- Project Start-up, Commissioning and Closure**
 - Project closure checklist, reports, and submissions

Additional Learning

- Causes of Structural Failures in Buildings**
 - Tuesday, September 26, 2023 | 9:00 am - 4:00 pm CDT
 - Air Barriers and Exterior Cladding**
 - Thursday, September 28, 2023 | 9:00 am - 4:15 pm CDT
 - Hydronic and Radiant Heating Systems**
 - Thursday, September 28, 2023 | 9:00 am - 4:00 pm CDT
 - Designing Higher-R Wood-Framed and Concrete Residential Assemblies for Northern Climates**
 - Friday, September 29, 2023 | 2:30 - 4:30 pm CDT
 - Drones in Construction**
 - Tuesday, October 3, 2023 | 9:00 am - 4:20 pm CDT
 - Wood Frame and Cold-Formed Steel Frame Design and Construction**
 - Thursday, October 5, 2023 | 9:00 am - 4:30 pm CDT
 - Understanding NSPE Engineering Code of Ethics**
 - Friday, October 27, 2023 | 11:00 am - 12:00 pm CDT
- For more information and other online learning opportunities visit:
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