# Overview of Services - Process Engineering International, LLC

**Phone: +1 (865) 220 8722**
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Process Engineering International, LLC specializes in process chemical engineering services and process design only. As such we provide the following types of services.

- Process Design
  - Design basis development
  - Alternatives evaluations or feasibility studies
  - Capacity evaluations/revamp studies
  - Relief valve studies
  - Evaluation of 3rd party process designs
  - Utility evaluations
  - Complete process design packages
  - Control scheme development
  - Creation of PFDs and P&IDs
  - Equipment plot plans
  - Equipment specifications
  - Preliminary cost estimates

- Process Modeling/Simulations
  - Detailed mass & energy balance
  - Unit operations design
  - Piping system hydraulics
  - Relief or flare system design/evaluation
  - User friendly simulation interface development

- Process Modification/Construction Oversight
  - Green field construction oversight
  - Equipment installation plans/coordination
  - Vendor fabrication inspections
  - Coordination of process tie-ins
  - Piping oversight
  - Vessel placement oversight
  - Vessel internal assembly oversight

- Operations Support
  - Commissioning and startup
  - Troubleshooting and optimization
  - Debottlenecking
  - Control systems startup/tuning
  - On-site process installation and modification oversight
  - Operating procedures
  - Process documentation
  - Operator and engineering staff training
  - Short term staff augmentation

- Process Safety Management
  - Conducting Process Hazard Analyses (PHAs)
  - Conducting Safety Integrity Level (SIL) selection analyses for Safety Instrumented Systems (SISs)
  - Conducting Layer of Protection Analysis (LOPA)
  - Conducting compliance Audits
  - Performing hazard assessments (including HAZOPs)

    - Developing Risk Management Plans
    - Resolving/implementing PHA recommendations
    - Developing PSM/RMP programs
    - Developing process safety information
    - PHA facilitation training
    - Incident investigation training

- Additional Capabilities
    - Plant investment due diligence evaluation
    - Process/equipment bid package preparation
    - Vendor bid evaluations and recommendations
    - Expert witness/legal team technical assistance