

# Industrial Engineering

**Puget Sound Chapter** of the  
**Institute of Industrial Engineers**  
**(IIE)**

<http://www.iienet2.org/Chapter/chap020/>

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# What Most Industrial Engineers (IEs) Do

- Depending on the type of industry, they may do some or all of the traditional Industrial Engineering (IE) activities:
  - Process Improvements
  - Facility Planning & Layout
  - Inventory Control & Inventory Management
  - Production Control & Shop Floor Control
  - Standard Data Development & Time Studies
- Some do Consulting work
- Some do Research in a lab environment
- Some teach at Engineering schools

# Industrial Engineering



# Types of Industries Industrial Engineers Work In

- Aluminum & Steel
- Materials Testing
- Ceramics
- Electronics Assembly
- Aerospace & Airplanes
- Plastics & forming
- Shipbuilding
- Entertainment
- Military
- Construction
- Forestry & Logging
- Mining
- Hospitals
- Banking
- State & Federal Government
- Transportation
- Oil & Gas
- Insurance
- Consulting

# Some Types of Industrial Engineering Projects

- Process improvement
- Problem resolution
- Elimination of rework
- Cost analysis
- Equipment justification
- Facility layout
- Stand alone benchmarking
- Systems integration

# Industrial Engineering Functional Work Areas

## Project Management



- Project Planning
- Project Scheduling
- Projects Coaching
- Risk Assessment

## Material



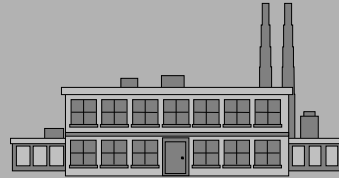
- Supplier On-Site Visits
- Supply Chain Management
- Parts Storage & Movement

## Safety



- Safety Investigations
- Ergonomic Evaluations

## Factory Operations



- Production Scheduling
- Lean Manufacturing
- Systems Integration

## Facilities



- Layout Design
- Process Flow Analysis

## Tooling



- Machine Capacity
- Tool Usage
- Tool Certifications

## Quality



- Chronic Rework
- Supplier Quality

## Product Engineering



- Integrated Product Teams
- Product Development
- Product Costing

## Transportation



- Logistics Planning
- Material Handling
- Alternative Methods

## Production Control



- Product Mix Analysis
- Forecasting

## Costing



- Comparison of Alternatives
- Cost & Savings Estimating

## Training



- Training Presentations
- Course Scheduling

# Future Prospects for Industrial Engineers

- Many Industrial Engineers still work in traditional manufacturing industries
- Very good prospects in the Service Industries including Health Care Industry
- Many industries still discovering the potential that IEs can offer their organizations