Josephine Simpson

Supplier Development Engineer Co Op

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STRENGTHS

Defect Analysis
Connected inspection findings with likely process causes during supplier work. A clear defect record often made next action easier.

Practical Collaboration
Shared concise findings during reviews and invited questions. Teammates could see how evidence supported each supplier decision.

Risk Focus
Compared capacity, lead time, qualification, and obsolescence risks. This helped keep continuity concerns visible before decisions moved forward.

Process Improvement
Applied lean, kaizen, and Six Sigma ideas to flow and measurement work. Small changes made review and rework patterns easier to follow.

Clear Documentation
Built organized Excel records, risk notes, and validation evidence. Careful documentation supported repeatable reviews without slowing team progress.

SKILLS

Supplier development

Manufacturing processes

Supplier management

Incoming inspection

Defect characterization

Design for Manufacturing

Process validation

Risk assessment

Capacity planning

Second sourcing

Component obsolescence

SUMMARY

Manufacturing engineering student preparing for **supplier development** work in medical device production. Academic projects have built practical experience analyzing incoming defects, standardizing **defect characterization**, evaluating supplier risk, supporting process validation, and applying **Design for Manufacturing** principles. Work includes second source planning, component obsolescence review, capacity assessment, supplier yield analysis, **inspection qualification**, and production readiness evaluation. Lean, Six Sigma, kaizen, and continuous improvement methods guide structured problem solving. Excel and PowerPoint support clear analysis, technical records, and design review communication. Coursework and supervised research strengthened prioritization, independent execution, and collaboration across quality, manufacturing, supply chain, and supplier focused activities. A thoughtful, hands on approach supports reliable decisions, clear documentation, and practical improvements across medical device supply operations.

EDUCATION

Bachelor's Degree in Manufacturing Engineering

Worcester Polytechnic Institute | GPA: 0 | 2027 | Worcester, Massachusetts

Coursework: *Manufacturing Processes, Supplier Management, Lean Manufacturing, Supply Chain Planning*

TECHNICAL SKILLS

- **Quality Engineering:** Incoming inspection, Defect characterization, Corrective action
- **Supplier Management:** Supplier development, Vendor resolution, Supplier yield
- **Manufacturing Methods:** Manufacturing processes, Process capability, Production transfer
- **Validation Practices:** Process validation, Risk based validation, Acceptance criteria
- **Supply Planning:** Capacity planning, Demand planning, Inventory planning
- **Sourcing Strategy:** Second sourcing, Supplier qualification, Supply continuity
- **Risk Management:** Component risk, Obsolescence planning, Mitigation planning
- **Lean Improvement:** Lean, Kaizen, Continuous improvement
- **Quality Methods:** Six Sigma, Design for Manufacturing, Quality at source
- **Microsoft Office:** Microsoft Excel, Microsoft PowerPoint, Microsoft Office Suite

EXPERIENCE

Supplier Development Engineering Student, Capstone Project

Academic Research | January 2026 - Present | Worcester, Massachusetts

Lead a supervised simulated **medical device** supplier program covering defect analysis, **vendor resolution**, validation, sourcing continuity, and production transfer. Coordinate technical reviews, organize evidence, and present decisions that connect manufacturing quality with supply chain risk.

- Linked incoming defects with manufacturing causes and corrective action priorities during supplier analysis.
- Standardized dimensional, cosmetic, and functional defect records in **Excel** for consistent review.
- Documented risk based validation inputs, acceptance criteria, and evidence for supplier process changes.
- Compared **second source** capability, **capacity**, lead time, and qualification needs for continuity planning.
- Reviewed component tolerances and inspection points with **Design for Manufacturing** principles before transfer.
- Presented supplier yield, inspection, obsolescence, and improvement findings during formal design review.

Manufacturing Quality Research Assistant, University Research Lab

University Research Lab | September 2025 - December 2025 | Worcester, Massachusetts

Lean methods Six Sigma Kaizen

Continuous improvement

LANGUAGES

English Native

Spanish Intermediate

MY CAREER

- Supplier Development Engineering Student, Capstone Project at Academic Research (8 Months)
- Manufacturing Quality Research Assistant, University Research Lab at University Research Lab (3 Months)
- Supply Chain and Manufacturing Planning Student, Course Project at Academic Research (4 Months)

Supported supervised manufacturing quality research focused on inspection patterns, process variation, lean flow, measurement capability, and supplier style risk documentation. Maintained organized records and communicated exceptions during weekly technical reviews.

- Connected inspection defect patterns with likely process variation sources across manufactured samples.
- Organized inspection results in Excel and **PowerPoint** for weekly research discussions.
- Applied **lean** and **kaizen** concepts to material movement, inspection handoffs, and rework loops.
- Completed supervised **Six Sigma** capability analysis using repeated manufacturing measurements.
- Prepared **supplier risk** notes covering availability, consistency, obsolescence, and mitigation actions.
- Maintained experiment records, prioritized weekly tasks, and reported exceptions for repeatable review.

Supply Chain and Manufacturing Planning Student, Course Project

Academic Research January 2025 - May 2025 Worcester, Massachusetts

Completed supervised planning work linking demand, supplier capacity, inventory, sourcing continuity, inspection, validation, and production readiness. Built practical recommendations through structured comparison of supply options and manufacturing risks.

- Modeled demand, supplier capacity, inventory, and production needs across a manufacturing **supply chain**.
- Compared single source and **second source** options using continuity, lead time, and qualification risk.
- Created an obsolescence case covering replacement review, inventory coverage, validation, and transition.
- Sequenced sourcing, validation, inspection, and readiness activities with **project management** methods.
- Proposed quality at source controls using supplier evidence and incoming verification criteria.
- Presented **planning** assumptions, manufacturing risks, improvement opportunities, and sourcing recommendations.

PROJECTS

Supplier Risk and Production Readiness Study 2026

Reliable medical device production begins with clear evidence about suppliers, components, and process risk. This study connected defect analysis, second source planning, inspection qualification, and risk based validation into one practical decision framework. Work reflects a belief that thoughtful preparation protects patients and gives manufacturing teams confidence during change.

Manufacturing Flow Improvement Analysis 2025

Good supply chain decisions start with respect for people who notice small process problems. This analysis examined material movement, inspection handoffs, rework loops, capacity, and obsolescence. Lean, kaizen, and Six Sigma methods shaped recommendations for smoother execution and more dependable manufacturing planning.

LEADERSHIP & AWARDS

- Dean's List recognition for strong academic performance, 2025 to 2026.
- Undergraduate Project Presentation Recognition for clear technical communication, 2026.
- Campus Quality Improvement Challenge team member, contributing practical process ideas, 2026.

CERTIFICATIONS

- Lean Six Sigma Yellow Belt 2026
- Microsoft Excel for Engineering Analysis 2025

PROFESSIONAL AFFILIATIONS

- Manufacturing Engineering Peer Study Group coordinator, supporting collaborative technical learning, 2025 to 2026.

- Campus Quality Improvement Challenge participant, contributing analysis and shared problem solving, 2026.

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST