

Mila Aguirre

Manufacturing Engineering Co op

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SUMMARY

Manufacturing Engineering student preparing for a 2027 co op, with supervised internship, laboratory, and academic experience supporting manufacturability, production problem solving, quality, cost, and launch planning. Applied **Design for Manufacturing, concurrent engineering, Lean Six Sigma**, JIT, Kaizen, TQM, Poka Yoke, and **Voice of the Customer** methods across electromechanical assembly and configurable mechanical assembly work. Built Excel analyses from cycle observations, quality records, measured results, and laboratory trials. Prepared tooling notes, process specifications, technical reports, process maps, and PowerPoint presentations for faculty, engineering, and operations audiences. Worked across multidisciplinary student and manufacturing teams, turning operator needs and customer feedback into practical process decisions. Brings a safety conscious, analytical approach and a genuine interest in contributing to manufacturing products from initial concept through launch and continued improvement.

EDUCATION

Bachelor's Degree in Manufacturing Engineering

Clemson University 🎓 GPA: 3.2 📅 2027 📍 Clemson, SC

Coursework: Design for Manufacturing, Manufacturing Processes, Lean Systems, Engineering Statistics

TECHNICAL SKILLS

- **Manufacturing Methods:** Machining, Assembly, Process Capability
- **Lean Practices:** JIT, Lean Manufacturing, Kaizen
- **Quality Methods:** TQM, Poka Yoke, Quality Control
- **Engineering Design:** Design for Manufacturing, Concurrent Engineering, Product Specifications
- **Data Analysis:** Excel, Cycle Analysis, Measured Results
- **Presentation Tools:** Microsoft Office, PowerPoint, Technical Reports
- **Production Planning:** Process Selection, Launch Sequencing, Material Flow
- **Tooling Development:** Fixture Requirements, Tooling Specifications, Operator Access
- **Customer Research:** Voice of the Customer, Customer Needs, Product Considerations
- **Project Delivery:** Project Coordination, Multidisciplinary Reviews, Pilot Evaluation
- **Manufacturing Improvement:** Continuous Quality Improvement, Process Experimentation, Cost Review

SKILLS

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|-----------------------------|-----------------------|--------------------------|-------------------------|
| • Manufacturing Engineering | • JIT | • TQM | • Process Documentation |
| • Design for Manufacturing | • Lean Manufacturing | • Poka Yoke | • Microsoft Office |
| • Concurrent Engineering | • Agile Manufacturing | • VOC Research | • Excel |
| • Lean Six Sigma | • Kaizen | • Tooling Specifications | |

EXPERIENCE

Manufacturing Engineering Intern

Blue Heron Components 📅 May 2026 - August 2026 📍 Greenville, SC

Supported supervised manufacturing engineering work for electromechanical assemblies, with focus on process constraints, tooling, quality records, manufacturability, and controlled improvement reviews. Prepared analysis and presentation materials that helped engineering and operations teams prioritize practical production changes.

- Documented assembly constraints and **manufacturability** observations during supervised production floor reviews.
- Built Excel analyses from cycle observations and **quality** records, prioritizing recurring line issues.
- Drafted fixture update requirements covering operator access, repeatability, quality, and production **cost**.
- Applied **Lean Six Sigma** and Kaizen methods during reviews, preparing changes for pilot evaluation.
- Presented trial findings through PowerPoint summaries to **manufacturing engineering** and operations stakeholders.
- Connected with cross functional partners during **Design for Manufacturing** reviews before controlled process changes.

Manufacturing Systems Capstone Student

University Project 📅 January 2026 - May 2026 📍 Greenville, SC

Developed a supervised manufacturing plan for a configurable mechanical assembly, covering process selection, tooling, inspection, material flow, specifications, quality controls, and launch sequencing. Coordinated student contributions and presented recommendations grounded in Voice of the Customer findings and laboratory evidence.

- Created a manufacturing plan covering process selection, **tooling**, inspection, and launch sequencing.
- Compared **JIT** and conventional material flow scenarios in Excel, documenting inventory tradeoffs.
- Developed a **Poka Yoke** concept and evaluated repeatability through structured laboratory trials.
- Organized quality findings with **TQM** principles, recommending a practical control approach.
- Conducted **Voice of the Customer** interviews, translating recurring needs into product considerations.
- Presented process maps, **specifications**, findings, and priorities to faculty and classmates.

Manufacturing Processes Laboratory Student

Student Lab 📅 August 2025 - December 2025 📍 Greenville, SC

Completed supervised manufacturing process laboratories involving machining, assembly, measurement, process capability, manufacturability, and emerging methods. Maintained experiment records, analyzed measured results, prepared technical reports, and assessed equipment, tooling, quality, cost, and operational implications.

- Completed supervised labs covering machining, assembly, measurement, capability, and **manufacturability**.
- Prepared process specifications identifying **equipment**, tooling, material, sequence, and verification requirements.
- Investigated dimensional variation during machining exercises using measured laboratory results.
- Reviewed design features against available **processes**, practicing **concurrent engineering** principles.
- Analyzed experiment records in **Excel** and prepared findings for **technical reports**.
- Evaluated an emerging manufacturing method for quality, cost, implementation, and operational implications.

PROJECTS

Configurable Assembly Launch Plan 📅 2026

Created a structured launch plan for a configurable mechanical assembly, connecting process selection, tooling, inspection, material flow, quality controls, and implementation priorities. Findings supported practical manufacturing decisions grounded in customer needs and laboratory evidence.

Electromechanical Fixture Improvement Study 📅 2026

Studied fixture requirements for electromechanical assembly work, weighing operator access, repeatability, quality, and production cost. Excel analysis and trial summaries helped frame a controlled improvement recommendation for manufacturing review.

LEADERSHIP & AWARDS

- Dean's List, Clemson University, 2025
- Manufacturing Systems Capstone Presentation Recognition, 2026
- Student Peer Mentor, College of Engineering, 2026
- Manufacturing Project Team Coordinator, University Project, 2026

CERTIFICATIONS

- Lean Six Sigma Yellow Belt 📅 2026
- Microsoft Office Specialist: Excel Associate 📅 2025

PROFESSIONAL AFFILIATIONS

- College of Engineering peer mentoring, supporting student learning and project collaboration.
- Manufacturing project team coordination, connecting classmates around clear technical deliverables.

LANGUAGES

- English (Native) • Spanish (Proficient)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST