Andres Contreras

Associate Quality Engineer

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STRENGTHS

Statistical reasoning
Control charts and capability studies turned scattered measurements into clear process conversations during laboratory research.

Inspection discipline
Inspection records became easier to trust after careful checks against drawings, criteria, equipment, and sampling limits.

Corrective action
Failure case studies taught a practical lesson: strong evidence makes corrective recommendations easier for teams to accept.

Technical communication
Concise charts and presentations helped faculty and student researchers discuss findings without losing important context.

Collaborative learning
Peer study coordination created a useful place for classmates to work through difficult quality methods together.

SKILLS

Quality Engineering

Quality Assurance

Statistical Process Control

Control Charts | Process Capability

Hypothesis Testing

Normal Distribution

Attribute Sampling

Variable Sampling

Sequential Sampling

Inspection Methods

Failure Analysis | Corrective Action

SUMMARY

Engineering student building six years of supervised technical, inspection, laboratory, and academic project experience alongside Industrial Engineering studies. Applies statistical methods, sampling plans, control charts, hypothesis testing, **normal distribution analysis**, and **process capability analysis** to evaluate product and process performance. Develops inspection and testing procedures, reviews **technical data packages**, examines manufacturing methods and tooling, and documents corrective action evidence. Laboratory work includes aerospace style components, flight control hardware, calibrated equipment, supplier quality case studies, audits, **Material Review Board** concepts, failure analysis, and project scheduling. Communicates findings through concise reports, presentations, charts, and evidence based recommendations. Brings careful problem definition, data collection, fact finding, and conclusion development to quality engineering teams supporting reliable aerospace manufacturing.

EDUCATION

Bachelor's Degree in Industrial Engineering

Wichita State University | GPA: 0 | 2027 | Wichita, KS

Coursework: *Statistical quality methods, manufacturing systems, engineering economics, quality assurance*

TECHNICAL SKILLS

- **Statistical Analysis:** Hypothesis testing, normal distribution analysis, process capability
- **Sampling Methods:** Attribute sampling, variable sampling, sequential sampling
- **Process Control:** Statistical process control, control charts, trend analysis
- **Inspection Practices:** Inspection methods, testing procedures, evaluation criteria
- **Quality Assurance:** Quality assurance, quality engineering, corrective action
- **Audit Activities:** Internal audits, supplier audits, quality surveys
- **Failure Review:** Failure analysis, nonconforming material, Material Review Board
- **Manufacturing Review:** Manufacturing methods, tooling, producibility
- **Technical Documentation:** Technical data packages, inspection records, work instructions
- **Business Applications:** Microsoft Office, Microsoft Excel, project scheduling software
- **Aerospace Quality:** Flight control products, aerospace manufacturing, regulatory requirements

EXPERIENCE

Quality Engineering Research Assistant

University Research Lab | August 2024 - Present | Wichita, KS

Supports supervised manufacturing research through quality datasets, dimensional inspection analysis, statistical studies, technical documentation, and evidence based recommendations for aerospace style components.

- Maintained quality datasets for machined **aerospace** components, improving inspection record consistency for research analysis.
- Built **control charts** and capability studies from dimensional measurements, clarifying variation patterns for faculty review.
- Applied **hypothesis testing** and **normal distribution analysis**, documenting reproducible conclusions in laboratory technical reports.
- Developed attribute and **variable sampling** exercises, comparing acceptance results with measurement limitations.
- Reviewed drawings, **inspection** procedures, and equipment records, identifying documentation gaps affecting repeatable evaluation.
- Presented statistical findings through charts and concise recommendations, guiding subsequent laboratory experiments.

Material Review Board

Project Scheduling

LANGUAGES

English — Native

Spanish — Proficient

MY CAREER

- Quality Engineering Research Assistant at University Research Lab (2.1 Years)
- Aerospace Quality Inspection Lab Analyst at Student Lab (1.5 Years)
- Quality Engineering Capstone Team Member at Capstone Project (4 Months)
- Statistical Quality Methods Project at Course Project (1.9 Years)

Aerospace Quality Inspection Lab Analyst

Student Lab | January 2023 - July 2024 | Wichita, KS

Performed supervised inspection and quality analysis for flight control style hardware, combining calibrated measurement, sampling studies, audit reviews, failure analysis, and scheduled laboratory delivery.

- Completed dimensional inspection studies on flight control hardware using calibrated laboratory **equipment** and defined criteria.
- Designed sequential and **attribute sampling** exercises, comparing inspection effort with decision quality across production lots.
- Created **statistical process control** charts, investigating out of control signals through structured data review.
- Performed simulated **failure analysis** on nonconforming components, preparing **corrective action** proposals for review.
- Audited work instructions and inspection records, documenting discrepancies and verifying corrections before submission.
- Used **project scheduling software** to coordinate inspection, analysis, reporting, and presentation milestones.

Quality Engineering Capstone Team Member

Capstone Project | August 2022 - December 2022 | Wichita, KS

Contributed to a supervised quality plan for an electromechanical control assembly, linking producibility, technical data, inspection points, prototype evidence, supplier review, and corrective action.

- Evaluated assembly **producibility** through drawings, manufacturing steps, tooling needs, inspection points, and technical data.
- Built a quality plan covering incoming material, in process checks, final **inspection**, sampling, and traceability.
- Collected prototype measurements and applied capability analysis, separating tolerance concerns from process variation.
- Conducted a simulated supplier quality review, identifying evidence needed for **corrective action** closure.
- Documented prototype failure modes, recommending process, **tooling**, and training changes for improved production readiness.
- Presented quality risks, statistical evidence, schedule status, and producibility findings to faculty reviewers.

Statistical Quality Methods Project

Course Project | August 2020 - July 2022 | Wichita, KS

Built foundational **quality engineering** analyses from manufacturing case datasets while completing technical coursework, strengthening data interpretation, procedure review, corrective action thinking, and technical communication.

- Built quality analyses from manufacturing case datasets, connecting **inspection** results with process control decisions.
- Used spreadsheet and statistical tools to visualize variation and compare measurements with acceptance criteria.
- Practiced problem definition, data collection, fact establishment, and conclusion development through structured case studies.
- Interpreted technical articles and quality procedures, relating regulatory expectations to manufacturing decisions.
- Prepared team reports connecting analytical results with **corrective action** and process control recommendations.
- Presented evidence based findings to classmates and instructors, strengthening technical explanation of quality concepts.

PROJECTS

Prototype Flight Control Quality Plan | **2022**

A tolerance concern surfaced during prototype review. Built a traceable quality plan linking material checks, sampling logic, inspection points, failure evidence, and producibility decisions.

Manufacturing Process Capability Study **2024**

Repeated measurements revealed variation worth investigating. Created control charts, tested distribution assumptions, and documented capability findings for supervised aerospace style component research.

LEADERSHIP & AWARDS

- Engineering Dean's Honor Roll, 2025
- Undergraduate Research Presentation Recognition, 2026
- Engineering Peer Study Group Coordinator, 2025 to Present

CERTIFICATIONS

- ASQ Quality 101 e Learning Certificate 2025
- Microsoft Learn Analyze Data with Excel 2024

PROFESSIONAL AFFILIATIONS

- Student Manufacturing Lab Safety Representative, 2024 to 2026
- Wichita State University Engineering Peer Study Group, 2025 to Present

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST