Course Syllabus

Quality Management and Customer Service

March – July 2025

Term IX

Professor

Choy Pun, Augusto Carlos

I. General Course Information

Subject:	Quality Management and Customer Service		
Pre-requisite:	Applied Statistics (Estadística Aplicada)	**Code:**	10310
Precedent:	None	**Semestre:**	2025-1
Credits:	4	**Term:**	IX
Weekly Hours:	5	**Course type:**	In-presence
Type Program(s)	Mandatory Industrial and Commercial Engineering	**Course Coordinator:**	Augusto Choy Pun achoy@esan.edu.pe

II. Summary

The course is an introduction to the principles of quality, including the practical application of quality assurance, quality control and quality management techniques, issues and methods. In it, the concept of quality is defined and the use of various methods such as Quality Assurance (QA), Quality Control (QC), Continuous Quality Improvement (CQI), Total Quality Management (TQM), Lean Production (LP), Just In Time (JIT), and Six Sigma (6σ) will be applied. It will stress the importance of quality at the design and planning stages as well as the basic understanding of the leadership and workplace culture required for the production of quality goods and services.

III. Course Objectives

Apply the fundamental concepts of Quality and Total Quality Management (TQM), their techniques, philosophies and strategies as they are practiced in the workplace today.
We will follow these subjects:

- Introduction to Quality Assurance (QA), Quality Control (QC), Continuous Quality Improvement (CQI), Total Quality Management (TQM) and their relation to customer driven design and customer service. - Students will be able to identify a range of quality contexts and the role of the customer in the quality cycle from the subject analyzed at this point.
- Introduction to some of the most applied approaches to quality such as Six Sigma / Lean / ISO 9000 / the Baldridge quality program among others. Procedures for the implementation of these frameworks will be introduced, with reference to their application in the workplace. - Students will be able to identify components and their relevance to industry and business contexts.
- Practical use of process control and improvement tools and techniques through their introductory application in laboratory sessions and case studies. - Students will be able to identify variation problems associated with industrial processes and apply the basic concepts and tools of statistical process control and improvement measures.

- Finally, the course will go through an overview of the leadership capabilities that are required for a quality environment to exist. - Student will be able to identify the phases of quality and their management.

IV. Learning Results

At the end of the course, students will be able to:

- Describe and contextualize quality in a given situation
- Identify quality frameworks, their components and techniques in order to apply them in the implementation of quality and their metrics
- Use and interpret methods and tools for process control and improvement
- Identify and describe the management and leadership skills required for quality programs.
- The ability to apply knowledge of mathematics, science, and engineering in the solution of complex engineering problems.
- The ability to create, select and use modern engineering and information technology techniques, skills, resources and tools, including prediction and modeling, with an understanding of their limitations.

V. Methodology

During the progress of the course, Quality Management and Customer Service, sessions will address the presentation and discussion of the theoretical aspects of the topic at hand, with the opportunity to practice and apply the subject matter using case studies and problem-solving exercises.

Students will prepare for class using their notes, case studies and readings assigned for each session. The material will be available prior to class on UEVirtual. Attendance and class participation will be recorded daily as it represents 10% of the PEP grade.

Learning Teams Activities

During the regular sessions, students will work in pairs or small informal groups to analyze cases or issues that we will discuss during the session. Student's participation is expected and included as part of PEP grade.

On the second week, the class will setup formal Learning Teams of 3 to 5 students; these Learning Teams will complete and present a Case Study before the Mid-Term Exam. If a student experiences difficulty working with his/her team, he/she should resolve those issues with his/her teammates, but if, however, that is not possible, please raise those issue with your teacher.

ESAN students work effectively in diverse groups and teams to achieve tasks and goals. They collaborate and function well in team settings performing leader as well as follower roles. They should respect diversity and behave in a tolerant fashion toward colleagues.

VI. Evaluation

The evaluation system is comprehensive and continuous with the objective of promoting learning in the student. The final grade is composed of Continuous Evaluation (PEP) (70 %), and Final exam (30%).

The Average Permanent Evaluation is calculated based on the student's learning process follow up: Reading Controls/ Quizzes / Cases/ Presentations / Research Work / Class Contribution. The weighted average of these marks results in the corresponding score.:

AVERAGE PERMANENT EVALUATION 70%		
Type of evaluation	**Description**	**Weight %**
Class contribution	Involvement in discussions	15
Attendance	Attending class with video	5
Reading Controls (RC)	Two RC quizzes (5% each)	10
Tests (PCs)	Three tests (15 marks each eliminate the lowest)	30
Learning Team Case Study (GP)	Presented case report (before EP)	10
Individual project (IP)	A written individual project using quality tools with presentation (before EF) Project Advance week 12 Project due week 15	30

Final Grade (PF) is calculated using the following formula:

$$PF = (0{,}70 \times PEP) + (0{,}30 \times EF)$$

Where:

PF = Final Grade
PEP = Continuous Evaluation
EF = Final Exam

VII. Programmed Content

WEEK	CONTENTS	ACTIVITIES / EVALUATION
LEARNING UNIT I: INTRODUCTION TO … **LEARNING OUTCOME:** • Describe and contextualize quality in given situations. • The ability to apply knowledge of mathematics, science, and engineering in the solution of complex engineering problems. • The ability to create, select and use modern engineering and information technology techniques, skills, resources and tools, including prediction and modeling, with an understanding of their limitations.		
1° March 17 - 22	**1. INTRODUCTION** 1. Course Introduction 2. Introduction to Quality 3. Quality Control, Quality Assurance and Quality Improvement 4. Total Quality Management (TQM) Evans, (2020) Ch. 1 & 2	**Presentation:** Course Methodology Guideline - review for Final Research Work Guideline - Review for UESAN written work presentation (APA Standards) Guideline - Effective Presentations **MiniCases:** - Skilled Care Pharmacy - Eurocamp Travel
2° March 24 – 29	**2. HISTORY OF QUALITY** 1. Quality Gurus and their Philosophies 2. Cost of Quality 3. Quality and Customers i. Customer Service ii. Customer driven design Evans, (2020) Ch. 3 & 5	**Presentations:** - Quality Gurus - Cost of Quality **MiniCases:** - Ritz Carlton - Lean in St James **Class Exercises:** - Cost of Quality - QFD **Assignment:** Team Project due on week 6, last class

<table>
<tr><th>WEEK</th><th>CONTENTS</th><th>ACTIVITIES / EVALUATION</th></tr>
<tr><td colspan="3">LEARNING UNIT II: APPLYING QUALITY
LEARNING OUTCOME:
• Describe and contextualize quality in given situations.
• Identify quality frameworks, their components and techniques for the measurement and implementation of quality.
• The ability to apply knowledge of mathematics, science, and engineering in the solution of complex engineering problems.
• The ability to create, select and use modern engineering and information technology techniques, skills, resources and tools, including prediction and modeling, with an understanding of their limitations.</td></tr>
<tr><td>3°

March 31 - April 05</td><td>3. QUALITY FRAMEWORKS
1. Introduction to the Quality Frameworks
2. Baldrige criteria
3. ISO 9001 standards
4. Lean / JIT
5. Six Sigma

Evans, (2020) Ch. 4</td><td>Presentations:
- Quality Frameworks
MiniCases:
- ISO 9000 in Sears
- Lean in St James
- Quality at Xerox
Assign: Individual Project weeks 12 and 15</td></tr>
<tr><td>4°

April 07 - 12</td><td>4. QUALITY IN ACTION
1. Process management
2. Quality in manufacturing:
i. SMED
ii. Poka Yoke
iii. Applying JIT / Lean

Evans, (2020) Ch. 7</td><td>Presentations:
- Process management
- Quality in manufacturing
MiniCases:
- JIT in LÓreal
- Lexus North America
- Boys and Boden
- Santa Cruz Guitar Co</td></tr>
<tr><td>5°

April 14 - 16</td><td>5. THE SEVEN QUALITY TOOLS

Evans, (2020) pp 499-502
Tague (2023) pp 1-13</td><td>Presentations:
- The 7 Quality Tools
MiniCases:
- PDCA and applying Quality Tools
Assign: RC1 W06: Ch 1-5 & 7</td></tr>
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<tr><th>WEEK</th><th>CONTENTS</th><th>ACTIVITIES / EVALUATION</th></tr>
<tr><td rowspan="2">6°

April 21 - 26</td><td>6. QUALITY METHODS
1. Tools and Techniques
2. Lean Thinking
i. PDCA and A3 problem solving
3. Six Sigma
i. DMAIC</td><td rowspan="2">Presentations:
- Lean Thinking
- Six Sigma
MiniCases:
-
RC1 due Ch 1-5&7
Assign: PC1 W7 Lu I & II
Group Proj due</td></tr>
<tr><td>Evans, (2020) Pp 457-502</td></tr>
<tr><td rowspan="2">7°

April 28 - May 03</td><td>7. QUALITY IN SERVICES</td><td rowspan="2">Presentations:
- Quality in Services
MiniCases:
- JIT in restaurants
- The State Univ Admission
Assign: Final Project
PC1 Lu I & II due</td></tr>
<tr><td>Evans, (2020) Ch. 1 pp. 23-31</td></tr>
<tr><td colspan="3">LEARNING UNIT III: PROOCESS CONTROL AND IMPROVEMENT
LEARNING OUTCOME:
• Identify quality frameworks, their components and techniques for the measurement and implementation of quality;
• Use and interpret methods and tools for process control and improvement
• The ability to apply knowledge of mathematics, science, and engineering in the solution of complex engineering problems.
• The ability to create, select and use modern engineering and information technology techniques, skills, resources and tools, including prediction and modeling, with an understanding of their limitations.</td></tr>
<tr><td rowspan="2">8°

May 05 - 10</td><td>8. PROCESS CONTROL I
1. Statistical Thinking, Accuracy and Precision
2. Process monitoring & data
3. X&R Charts
4. P Chart
Statistical Process Control (SPC)</td><td rowspan="2">Presentations: Lab Sessions
- Process Control I
MiniCases:
- JIT in restaurants
- The State Univ Admission
Assign: PC 2 week 10
Final Project Advance week 12</td></tr>
<tr><td>Evans, (2020) Ch. 8 pp. 371-390</td></tr>
</table>

WEEK	CONTENTS	ACTIVITIES / EVALUATION
9° May 12 - 17	**9. PROCESS CONTROL I** 5. Statistical Thinking, Accuracy and Precision 6. Process monitoring & data 7. np Charts 8. u Chart 9. C Chart Statistical Process Control (SPC) Evans, (2020) Ch 9 pp. 391-435	**Presentations: Lab Sessions** - Process Control II - Process Capability **Exercises:** - np Charts - u Charts - c Charts **MiniCases:** - Process Design and Quality Planning
10° May 19 - 24	**10. PROCESS CONTROL II** 1. Statistical Process Control (SPC) 2. Process Capability Evans, (2020) Ch 10 & 13	**Presentations: Lab Sessions** - Process Control II - Process Capability **Exercises:** - X-R Charts - p Charts - Process Capability **MiniCases:** **Test 2:** LU III

<table>
<tr><th>WEEK</th><th>CONTENTS</th><th>ACTIVITIES / EVALUATION</th></tr>
<tr><td colspan="3">LEARNING UNIT IV: HIGH PERFORMANCE AND QUALITY LEADERSHIP
LEARNING OUTCOME:
• Describe and contextualize quality in given situations
• Identify and describe the management and leadership skills required for quality programs.
• The ability to apply knowledge of mathematics, science, and engineering in the solution of complex engineering problems.
• The ability to create, select and use modern engineering and information technology techniques, skills, resources and tools, including prediction and modeling, with an understanding of their limitations.</td></tr>
<tr><td rowspan="2">11°

May 26 - 31</td><td>11. PRODUCT DESIGN
1. QFD
2. DFMEA
3. Failure</td><td rowspan="2">Presentations:
- Failure
- Performance Measurment
- Performance Management
MiniCases:
- Monfort College
- Service Recovery
- Raydale ConferenceCntre
- Wainwright vs Baptist</td></tr>
<tr><td>Evans, (2020) Ch. 07 pp. 305-353</td></tr>
<tr><td rowspan="2">12°

June 02 - 06</td><td>12. PERFORMANCE
1. Performance measurement
2. Knowledge Management
3. Performance management</td><td rowspan="2">Presentations:
- Quality Workplace
MiniCases:
- You want us to…
- Golden Plaza
- Landmark
- The MBA Candidate
Final Project Advance
Assign: RC2 – Ch 6, 8, 9, 10, 12, 13</td></tr>
<tr><td>Evans, (2020) Ch.12 pp. 597-624</td></tr>
<tr><td rowspan="2">13°

June 09 - 14</td><td>13. LEADING QUALITY
1. Leadership roles
2. Team leadership</td><td rowspan="2">Presentations:
- Leading Quality
MiniCases:
- The Power of Leadership
- David Kearns</td></tr>
<tr><td>Evans, (2020) Ch. 13 pp 637-655</td></tr>
</table>

WEEK	CONTENTS	ACTIVITIES / EVALUATION
14° June 16 - 21	**14. SUSTAINING QUALITY** 1. The quality journey 2. The culture of quality Evans, (2020) Ch. 14 pp 667-701	**Presentations:** - Sustaining Quality **MiniCases:** - St Lukes **PC 3: LU IV** - Research Article 3
15° June 23 - 28	**15. COURSE REVIEW** **16. EXAM BRIEFING**	**Final Project Presentation**
16° June 30 - July 05	**FINAL EXAMS**	

VIII. Bibliography

Mandatory Readings:

- James R. Evans, William M. Lindsay (2020)- *Managing for Quality and Performance Excellence-Cengage Learning*, 11th Edition. Cengage Learning
- Nancy R Tague (2023) *The Quality Toolbox*-ASQ Quality Press 3rd Ed.

Other Reading:

- Evans, J. R. and Lindsay, W. M. (2011) *Managing for Quality and Performance Excellence, 8th Edition.* Mason, OH: Cengage Learning. [TS156 Q3E93 2015]
- Tague, N. R. (2005), *The Quality Toolbox*. 2nd edition. Milwaukee: ASQ Quality Press.
- Nancy R Tague (2023) *The Quality Toolbox* ASQ Quality Press 3rd Ed.
- James R. Evans, William M. Lindsay (2019) *Managing for Quality and Performance Excellence, 11th Ed*-Cengage Learning
- Schein, E. H. (2017) *Organizational Culture and Leadership*. 5th edition. Hoboken:Wiley
- Durivage, M. A. (2015), *Practical Engineering, Process, and Reliability Statistics.*
- Okes, D. (2019), *The Core of Problem Solving and Corrective Action.* Milwaukee: ASQ Quality Press.
- Sowers, V. E. (2011). *Essentials of Quality.* London: Wiley.
- *Grant,* E. L., and R. S. *Leavenworth. (1996). Statistical Quality Control. 7th edition*. New York: McGraw Hill, [TS156 G7 1996]
- Harrington, H. J. (1995). *Total Improvement Management.* New York: McGraw Hill, 1995. [HD31 H345]
- ISO 9001 : 2015 quality management system

- **Other relevant books in ESAN Library:**

- Lowenthal, Jeffrey N. (2002). *Six sigma project management: a pocket guide.* Milwaukee, WI: ASQ Quality Press. [TS156.8 L69e 2002]
- Melan, E., H., O. (1995) *Process management: a systems approach to total quality.* New York: Productivity Press. [HD62.15 M45]

Research Ethics:

PLEASE NOTE: Internet searches will often take you to non-academic information resources. You may supplement your research with these sources, but keep in mind that the information you find there may not be accurate, since it does not come under a formal oversight or peer-review process.

While you may use and cite non-academic resources such as Wikipedia when working on assignments, you may not rely on them exclusively. The majority of your sources should be peer-reviewed academic journals. Further, remember that you are responsible for the accuracy of any facts you present in your assignments and therefore should confirm the veracity of information you find on non-academic sources through further research.

IX. Professors

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