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**AAM491 Quality Systems**

Syllabus for Jian Qiao University

**Instructor**: Ray Axmacher

**Title:** Adjunct Professor

**Office:** Online / Zoom

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**Office Hours:**

Before or after class, or by appointment

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**Course Description**

This is a three credit course introducing the student to the basics of Quality Systems Management as it applies across all product and service industries, with an emphasis on aviation. The ISO 9000 quality standard will be used as a framework for developing this knowledge.

Students will be shown the intricacies of how and why certification is obtained. The course includes topics such as history of quality systems, quality terminology, inspection and test status, and control of quality records.

We will also closely look at other quality systems such a Lean, Six Sigma and other industry specific
quality methods.

This course will be taught using a variety of techniques including:

* Weekly Lecture
* Text readings
* Class examples and discussion
* Case analysis
* Supplemental articles and readings
* Computer / problem simulations.

Credits: 3

Grading System: Letter Grade

**Prerequisites**

ENG110

**Course Objectives and Outcomes**

After successful completion of this course, students will have acquired the ability to answer the following questions:

* What role do Quality systems play in industry? Aviation?
* How is “quality” viewed and measured by different groups within a company?
* How does a company establish and certify a Quality program under ISO?
* How does the application of Quality Management principles and systems affect a company’s reputation and profitability?

**Course Requirements**

**Assignments**

**Individual Assignment**

Read and present (i.e., summarize, discuss, critique) an article from a current publication on a Quality Management issue.

Students are required to make this present this paper on the notified date. If you do not present on that date, you will not have a chance to make up this assignment.

**Group Assignment**

This assignment requires work in groups of 4 members. You will study either a specific company choosing one or more of the topics discussed in class, or choose a topic and do a comparative analysis of two or three companies for that topic

Present your complete project as a group. Presentations should last 10 to 15 minutes and will be followed by questions from your classmates.

**Examinations**

A quiz is given for each chapter covered in the text.

**Required Text(s)**

|  |  |
| --- | --- |
| Text: | *Managing Quality: Integrating the Supply Chain*, 6th Edition |
| ISBN: | 978-0-13-379825-8 |
| Author(s): | Foster, S. Thomas |
| Publisher | Pearson, 2016 |

**Required Materials and Proficiencies**

* Text as noted above.
* Laptop running the standard Microsoft suite of productivity applications (i.e., Excel, PowerPoint, Word)
* Supplementary articles from various sources as directed by the instructor
* Basic mathematical concepts
* Mid-level Excel (Spreadsheet)
* Basic PowerPoint (Presentation)
* Basic word processing (MS Word)

**Additional Reading List**

Articles as directed by the instructor.

**Grading Policy**

The student's grade will be determined as follows:

|  |  |  |
| --- | --- | --- |
| **Assignment** | **Due Date** | **Percentage** |
| Quizzes |  Weekly | 25% |
| Class Assignments | TBD | 30% |
| Mid Term | TBD | 20% |
| FINAL | TBD | 25% |
| Class Participation / Attendance | N / A | 5% |
|  | **TOTAL** | **100%** |

**Grading Scale**

|  |  |  |
| --- | --- | --- |
| **Grade** | **Numeric Value** | **Standard** |
|  A | 90-100 | Excellent |
|  B+ | 85-89 |  |
|  B | 80-84 | Good |
|  C+ | 75-79 |  |
|  C | 70-74 | Average |
|  D\*\* | 60-69 | Min. Passing |
|  F | Below 60 | Failure |

\*\*For Aviation Training Institute students, minimum passing grade

for all courses in the airframe and powerplant curriculum is a “C”.

**Incomplete Grades**

Requests for Incomplete grades must be made in writing before the course ends, and after the mid-term has been passed.

**Course Schedule**

**\*Course Schedule is subject to change**

|  |  |  |  |  | **Estimated Assignment Times** |
| --- | --- | --- | --- | --- | --- |
| **Summer Term Week** | **Fall or Spring Term Week** | **Session** | **Topics** | **Text Chapters** | **Read** | **Homework:****Answer Questions Assigned (all chapters)** | **Study:****Review Notes for Exams (all chapters)** |
| **1** | **1** | **1** | Differing Perspectives on Quality | 1 | 1 | 1 | 1 |
| **2** | 1 | 1 | 1 |
| **2** | **3** | Quality Theory | 2 | 1 | 1 | 1 |
| **4** | 1 | 1 | 1 |
| **3** | **5** | Global Supply Chain Quality and International Quality Standards | 3 | 1 | 1 | 1 |
| **2** | **6** | 1 | 1 | 1 |
| **4** | **7** | Strategic Quality Planning | 4 | 1 | 1 | 1 |
| **8** | 1 | 1 | 1 |
|  **2** | **5** | **9** | Voice of the Customer | 5 | 1 | 1 | 1 |
| **10** | 1 | 1 | 1 |
| **3** | **6** | **11** | Voice of the Market | 6 | 1 | 1 | 1 |
| **12** | 1 | 1 | 1 |
| **7** | **13** | Quality and Innovation in Product and Process Design | 7 | 1 | 1 | 1 |
| **14** | 1 | 1Complete Preparation of Article Review | 1 |
| **8** | **15** | Designing Quality Services | 8 | 1 | 1 | 1 |
|  | **16** | 1 | 1 | 1 |
| **4** | **9** | **17** | Managing Supplier Quality | 9 | 1 | 1 | 1 |
| **18** | 1 | 1 | 1 |
| **10** | **19** | Tools of Quality | 10 | 1 | 1 | 1 |
| **20** | 1 | 1 | 1 |
| **5** | **11** | **21** | Statistically Based Quality Improvement for Variables | 11 | 1 | 1 | 1 |
| **22** | 1 | 1 | 1 |
| **12** | **23** | Statistically Based Quality Improvement for Attributes | 12 | 1 | 1 | 1 |
| **24** | 1 | 1 | 1 |
| **13** | **25** | Six Sigma Management and Lean Tools | 13 | 1 | 1Complete Team Projects | 1 |
| **6** | **26** | 1 | 1 | 1 |
| **14** | **27** | Managing Quality Improvement Teams and Projects | 14 | 1 | 1 | 1 |
| **28** | 1 | 1 | 1 |
| **15** | **29** | Implementing and Validating the Quality System | 15 | 1 | 1 | 1 |
| **30** | 1 | 1 | 1 |