Syllabus – Fall 2012
OM-456-001: Quality Management

Instructor: Dr. Michael Naor, Assistant Professor of Operations Management
Office: Enterprise Hall, Room 153
Phone: (703) 993-4756
E-mail: mnaor@gmu.edu

Office Hours:
The office hours will be at Fairfax campus, Enterprise Hall, Room 153, on:
Tuesday 1:30 - 2:30 PM and Wednesday 5:30 – 6:30 PM,
Students are most welcome by appointment at other times too.

Prerequisites: Grade of “C” or better in OM 210, and sophomore standing. Prerequisites are strictly enforced by the Office of Academic Advising.

Textbook:

Additional Reading:

Course Website: http://courses.gmu.edu/
For login instructions: http://www.irc.gmu.edu/CE6Transition/studentorientation.pdf

PowerPoint lecture notes will be posted throughout the semester on the course website. For ease of taking notes, print out the lecture notes and bring them to class. I recommend using the ‘Handouts’ option with 3 Slides per page to save paper. (The PowerPoint notes are only supplemental material. They are not a substitute or replacement for classroom discussions and attendance)

Students must be officially registered in this section to receive a grade. It is the sole responsibility of the student to verify their own registration status. (I will not verify your
registration.) Specifically, you will not receive a grade if your name does not appear on the official class list. (Don’t wait until the end of the semester to be surprised) Registration problems should be directed to either the SOM Office of Student Services or the Registrar’s Office.

General Learning goals for the Information Systems & Operations Management Major:
Students who are competent in the Information Systems & Operations Management discipline will meet the following learning goals:

1. Students will be able to apply knowledge of information technology and business functions to understand its application in assessing, designing and improving business processes.
2. Students will develop data organization, storage and processing solutions to support organizational needs for information management. They will also have the option of developing skills in the area of supporting decision making through business intelligence solutions.
3. Students will use knowledge of computer networks as part of the IT solutions for improving business processes. They will also have option of developing more advanced skills in the areas of network and security.
4. Students will effectively manage information technology projects.
5. Students will understand the overall systems development life cycle and be able to recommend IT system solutions accordingly. They will also have option of learning appropriate development tools to develop prototype of IT solutions for business management.

Objectives of this Quality Management Course:
The main goal of this course is to provide the student with the ability to understand the theoretical foundations of quality management and how to implement both in industrial and government arenas. The course starts by reviewing the history of the quality movement from the beginning of the 20th century and afterwards continue to describe different quality methods such as Total Quality Management and Statistical Process Control until the emergence of Lean Six Sigma techniques in the last decade. The material is conveyed through a blend of homework and case study that are specifically designed to be prepared by teamwork in the spirit of the quality management philosophy.

Grading Scheme:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 homeworks (each assignment is 5%)</td>
<td>15%</td>
</tr>
<tr>
<td>1 Case study</td>
<td>5%</td>
</tr>
<tr>
<td>Midterm</td>
<td>40%</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

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Final course letter grade assignments:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93% and above</td>
</tr>
<tr>
<td>A-</td>
<td>89% - 92%</td>
</tr>
<tr>
<td>B+</td>
<td>86% - 88%</td>
</tr>
<tr>
<td>B</td>
<td>81% - 85%</td>
</tr>
<tr>
<td>B-</td>
<td>78% - 80%</td>
</tr>
<tr>
<td>C</td>
<td>70% - 77%</td>
</tr>
<tr>
<td>F</td>
<td>below 70%</td>
</tr>
</tbody>
</table>

Assignments:
- There will be three mandatory homework assignments and one mandatory case study. Students are expected to solve all assigned problems and case studies. Both class assignments and case study are a very important component of the learning process, and each assignment/case must be turned in no later than its due date. Individual assignments are to be solved individually with no assistance from anyone.
- Grading for the course will be based on total points earned by the end of the course. There will be one midterm and a final comprehensive exam. Whole letters, with plus and minus, will be assigned as the final course grades.
- For technical help with your personal computing systems or using BlackboardCE6, call the GMU support center at 703-993-8870 or send e-mail to courses@gmu.edu
- Download the pertinent course documents before class and well before exams and assignment due dates. Bring these to class as your notes for annotation.
- The course website is an electronic medium to facilitate the transfer and dissemination of the course content. It is not a replacement or substitute for attending class.

Attendance Policy
Attendance in this class is highly recommended in order to be successful in learning the course content. My past experiences as well as my expectations are that in order to be successful in this class, attendance is essential. The student is solely responsible for all assignments and material presented in class even if missed due to absence.

Make up Exams
Notice will be given before each exam; if you cannot take the exam at the designated time, you must make arrangements with the instructor before the exam is given. Exams may be made up only under extreme emergencies AND at the sole discretion of the instructor. A penalty for lateness may be assigned. Missed exams will be assigned a score of zero.

Disability
All academic accommodations due to disability should be arranged through the Office of Disability Service (ODS). If you are a student with a disability and you require academic accommodations, please contact the ODS (http://ods.gmu.edu/) at 703-993-2474. I will cooperate fully with the ODC to accommodate all student’s special needs.

Honor Code
Students are obligated to strict adherence to the University honor system and code, as described in the 2012-13 George Mason University catalog.

Class Etiquette
Be courteous to and respectful of others in class!
TENTATIVE COURSE SCHEDULE

Some sections in text chapters will be skipped, as announced. Some material not contained in the text may be presented in class, as noted. The exam dates and the specific material coverage for each exam will be announced in class.

For other important dates, consult the Fall 2012 Schedule of Classes for the Academic Calendar or visit:  http://registrar.gmu.edu/calendars/2012Fall.html#dates

The tentative list of topics is given below. The list is subject to change during the semester.

1. Introduction - course overview, goals, and syllabus
2. Quality definition and theoretical framework
3. Malcolm Baldrige National Quality Award
4. International Quality Awards in Europe, Canada, Israel, Australia, India and China
5. ISO9000, ISO2000, and ISO14000
6. Total Quality Management (TQM)
7. The seven elementary quality tools
8. Software Quality Assurance (SQA)
9. The SEI process Capability Maturity Model (CMM) for software

   • Midterm (Wednesday, 10/17/2011)

10. Principles of Six Sigma
11. Theory of Six Sigma based on the academic literature
12. Building High Performance Government through Lean and Six Sigma
13. Design for Quality
14. Taguchi Loss Function and Reliability testing
15. Analyzing Statistical Process Control charts

   • Comprehensive Final Exam (Wednesday, 12/12/2012, 7:30 – 9:30 PM)

* The class on Wednesday, 9/26/2012 is cancelled. (A reading will be assigned for students).

Have a Great Fall Semester!