Hagerstown Community College Master Syllabus
ADM 201 Lean Manufacturing & Quality Assurance

Course Information
2 Credits
Spring 2020

Instructor Information

Course Description
This course teaches students the principals, concepts, techniques, and application of Lean Manufacturing and Quality Assurance in today’s advanced manufacturing environment as well as other technology based businesses. Subjects will include “5S”, safety, “Six Sigma”, morale, extended equipment life, and decreased downtime and defects. Students will learn how to use a systematic approach and statistical methods to improve product quality by minimizing variability in a process. Root-cause analysis, using the “5 Whys” strategy, will also be introduced. The Kaizen concept, using Continuous Improvement Techniques will involve both conscious and sub-conscious thinking about improvements from everyone involved in the business. Quality assurance, focusing on techniques used to systematically monitor and evaluate a project, service, or facility, is also reviewed. Finally, internationally agreed standards such as ISO will be discussed. Pre-req English 99 or higher. Web Based instruction and in-class activities will be used.

Textbook and Course Materials
Quality Management for Organizational Excellence: Introduction to Total Quality, 8th Edition
Author: David L. Goetsch, Stanley B. Davis

REFERENCES (optional):
Total Productive Maintenance, 1st Edition
Author: Steve Borris

John Bicheno, Matthias Holweg
Publisher: PICSIE Books, 2016

Student Learning Outcomes
After successfully completing this course, students will be able to:

• apply Total Productive Maintenance concepts.
• apply Lean Manufacturing concepts.
• understand and apply Six Sigma concepts.
• demonstrate an understanding of teamwork and its benefits.
• demonstrate an understanding the effects of negativity and culture change.
• understand and apply Problem-Solving and Decision-Making techniques.

Definition of Credit Hour: Classroom Courses
To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute academic hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours in the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit. For most classes, students should expect to complete at least 2 hours of coursework outside of class for each hour of in-class coursework.

<table>
<thead>
<tr>
<th>Classwork type</th>
<th>Direct Faculty Instruction</th>
<th>Student Work Out of Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>In-class 37.5 hours required</strong></td>
<td><strong>75 hours required</strong></td>
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<tr>
<td>In-class lecture and discussion</td>
<td>37.5 hours</td>
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<tr>
<td>Reading</td>
<td>20 hours</td>
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<tr>
<td>Quiz/exam studying</td>
<td>10 hours</td>
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<tr>
<td>Reading question completion</td>
<td>15 hours</td>
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<tr>
<td>Projects/Assignments</td>
<td>30 hours</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>37.5 hours</strong></td>
<td><strong>75 hours</strong></td>
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Services for students with disabilities
Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.