

Clackamas Community College

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Section #1 General Course Information

Department: Manufacturing

Submitter

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Course Prefix and Number: QS - 122

Credits: 3

Contact hours

Lecture (# of hours): 30

Lec/lab (# of hours):

Lab (# of hours):

Total course hours: 30

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: LEAN Concepts and Tools

Course Description:

Provides an introduction to LEAN manufacturing and an overview of the LEAN manufacturing journey in the cultural transformation of an organization. It gives participants an overview of the Toyota Production System and the manufacturing conditions responsible for transferring the system worldwide. The course discusses the fundamental tools and methods of LEAN manufacturing, including Kaizen (continuous improvement culture), 5S System, Visual Management, Flow (Pull System versus Push), Standardized Work, Value Stream Mapping and Performance Measurements. Case examples and LEAN manufacturing simulations, as well as people issues are an intricate component of the course.

Type of Course: Career Technical Supplementary

Can this course be repeated for credit in a degree?

No

What is the target audience/industry for this class?

Manufacturing

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

✓ Not every term

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

No

Will this course appear in the schedule?

No**Student Learning Outcomes:**

Upon successful completion of this course, students should be able to:

1. demonstrate an understanding of the principles of LEAN Manufacturing
2. explain and define how LEAN Manufacturing can impact the success of an organization
3. identify and describe various LEAN implementation tools and how/why they are used
4. develop a current and future state value stream map
5. define standard work to a common work process
6. demonstrate visual management techniques in the workplace

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. LEAN history.
2. Review of Toyota Production System (TPS).
3. LEAN Manufacturing as a system.
4. Focus on flow.
5. Kaizen (improvement culture).
6. 5S system.
7. Visual management.
8. Heijunka (workload leveling).
14. Flow.
15. Kanban (pull system versus push).
16. Standardized work.
22. Built-in quality (Jidoka/Poka-Yoke).
24. Value stream analysis and mapping.
25. Performance Measurements.
27. Total productive maintenance.
29. Case studies.
30. LEAN simulation.
32. People issues.

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

First term to be offered:

Specify term: Winter 2016
