

Master Course in Ocean College, Zhejiang University

Course subject: Lean manufacturing and management

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Item	Content
Course Description	<p>The famous lean manufacturing idea and practice was developed by <i>TOYOTA</i>. Based on the idea and practice of lean manufacturing idea and practice of <i>TOYOTA</i>, this course introduces the theories of lean manufacturing and discuss each part of the whole production process of companies. This course analyses the design methods of lean manufacturing process from different environments and targets of companies. By using case study, the course will help students to understand the advantages of lean manufacturing and its necessary conditions. It will also enable students to utilize theories and methods to analyse the practical problems, propose improvement solution, and design the process of lean manufacturing and management. On successful completion of this course students will be able to:</p> <ul style="list-style-type: none">● Discuss and analyse a lean manufacturing system;● give suggestions to improve a system from the view of lean manufacturing and● get some knowledge of how to implement a lean manufacturing for a company with the application of principles.
Overview of Learning Activities	<p>This course will appear with the whole manufacturing system of <i>TOYOTA</i>. Every theory or methodology introduced in this course will be discussed with the practice of the company. In addition to reading literature, the students on this course will be also encouraged to use the theory, idea, or methodology introduced in this course to analyse or solve some real problems in our daily life. Learning activities will be formally presented on every lecture, and the term project presentation will be assigned to the last lecture with the final exam.</p>
Overview of Course Assessment	<p>The assessment tasks, their weighting and the course learning outcomes to which they are aligned are as follows:</p> <p>Assessment Task 1 – Term Project Report: 30%</p> <p>Assessment Task 2 – Quiz and Exam: 40%</p> <p>Assessment Task 3 – Presentation: 30%</p>

Session Topics

Session 1: The history and basic framework of lean manufacturing

Session 2: The steps of the implementation of lean manufacturing system

Session 3: The application of Kanban system

Session 4: How the smooth manufacturing strategy improve inventory management under demand uncertainty

Session 5: How to control the lead time

Session 6: Standardized operation and flexible production

Session 7: Information management in the lean manufacturing system

Session 8: Student term project presentation and Exam