

# H-Form ISE 313

Course Information:	
<b>Code and Title:</b>	ISE 313 Lean Manufacturing
<b>Prerequisites:</b>	ISE 230
<b>Co requisite (if any)</b>	
<b>Credit Hours: 3</b>	Lecture Hrs. (45), Tutorial Hrs. (15), Lab (0), <b>Total Credits ( 60 )</b>
<b>College/ Department:</b>	College of Engineering/Industrial and Systems Engineering

Course Description:
The purpose of this course is to provide the student with the fundamental knowledge of current continuous process improvement methodologies in use today within competitive manufacturing environments. This introductory course will expose the student to the concepts of Lean Manufacturing theory and the various tools and techniques involved with a lean implementation. This course will present different aspects of lean manufacturing to ensure that at the completion of the course, students will be competent to participate effectively as a team member in lean implementation projects.

Course Objectives:
This course covers the principles of the basic knowledge of lean manufacturing, tools, techniques and implementation outcomes. At the end of the course students should understand the lean manufacturing philosophy, understand the Toyota Production System (TPS) philosophy, apply the lean manufacturing process in practice, apply the Toyota Production System (TPS) process in practice and develop Lean Manufacturing documentation on a real project and Toyota Production System (TPS) documentation on a real project.

Course Learning Outcomes		
		PLO
Knowledge Understanding		
<b>1.1</b>	Identify the principles of lean manufacturing and continuous improvement	K1
<b>1.2</b>	Select appropriate method and instruments for lean management	K4
Skills		
<b>2.1</b>	Determine the lean management process characteristics to drive improvement	S3
<b>2.2</b>	Develop engineering interpretation and judgement to solve problems and make decisions	S4
Values		
<b>3.1</b>	Work effectively on a team while participating in kaizen events within manufacturing environments	V1

Textbook:			
<b>Title:</b>	Lean Production Simplified,		
<b>Author(s):</b>	Pascal Dennis,		
<b>Publisher:</b>	Taylor & Francis.	<b>Year and Edition:</b>	3 <sup>rd</sup> 2007
<b>Other Useful Resources:</b>	Lean Thinking, 2nd Edition by James (Jim) Womack, PhD and Dan Jones, 2003, ISBN-13:978-0743249270 Goldratt, The Goal, North River Press, 2004 Third Edition The Toyota Way, Liker, Jeffrey K. McGraw-Hill, 2004, ISBN 0-07-139231-9		