

<p>Learning objectives Students who successfully complete this module:</p> <ul style="list-style-type: none"> • Understand the value of unconditionally committing to a long-term management philosophy • Learn the fundamentals of TPS and develop an understanding of how TPS creates an organizational culture focused on continuous improvement • Understand the meaning of “waste” in manufacturing and learn how to develop systems and processes aimed at continuously identifying and eliminating waste • Learn the “built-in quality” concept or jidoka, and understand how to effectively build quality into production processes • Learn how the systematic application of the TPS management principles effectively contributes to achieving operational excellence • Formulate and effectively solve, using the management principles of the Toyota Production System, real-life manufacturing problems • Apply in a practical situation core tools of TPS such as value stream mapping and A3 Thinking • Design a production system or process that meets real-world constraints such as financial, ergonomics and safety, quality, manufacturability, and sustainability
<p>Learning contents</p> <p>This course provides engineering students with the opportunity to learn the fundamentals of the Toyota Production System (TPS), which is a process improvement methodology that is based on continuous improvement and quality and that encompasses management principles focused on the adoption of a long-term manufacturing management philosophy, waste elimination, problem solving, operator and supplier development, and organizational learning, which have been instrumental to allow manufacturing and service companies from around the world to achieve and sustain operational excellence. To maximize the student’s learning experience, different methods are used to achieve the learning goals of this course. They are: industry projects, Harvard case studies, and textbook-based assignments. At the completion of this course, students should be able to understand the core concepts of TPS and successfully apply the TPS management principles in a real-world context. Students from related disciplines such as business and supply chain management are welcome.</p>
<p>Student Skills developed successfully on completion of the module:</p> <ul style="list-style-type: none"> • Problem solving and continuous improvement thinking • Building quality into processes • Team work and communication skills • Waste elimination and lean thinking • Leadership and people empowerment • Customer centricity and organizational learning culture

<p>Requirements/prerequisites</p>	<p>- Textbook: Title: The Toyota Way Author: Jeffrey K. Liker Edition: 2nd ISBN-13: 978-1-260-46851-9 Publisher: McGraw-Hill Required</p> <p>– Supplemental Book: Title: The Toyota Way Fieldbook Authors: Jeffrey K. Liker & David Meier ISBN-13: 978-0-07-144893-2 Publisher: McGraw-Hill Required</p> <p>– Harvard Case Studies Case Study #1 Title: Decoding the DNA of the Toyota Production System Authors: Steven J. Spear and H. Kent Bowen Publisher: Harvard Business Publishing Prod. Number: 99509-PDF-ENG Required</p> <p>Case Study #2 Title: Toyota Motor Manufacturing, U.S.A., Inc. Author: Kazuhiro Mishina Publisher: Harvard Business Publishing Prod. Number: 693019-PDF-ENG Required</p> <p>Case Study #3 Title: A3 Thinking Authors: Steven J. Spear and H. Kent Bowen Publisher: Harvard Business Publishing Prod. Number: UV8060-PDF-ENG Required</p>
<p>Recommended literature</p>	<p>Toyota Production System: Beyond Large-Scale Production by Taicho Ohno</p>
<p>Examination</p>	<ul style="list-style-type: none"> - Three Harvard case studies - Three industry projects - One reflection assignment on field trips
<p>Max. participants</p>	<p>25</p>
<p>Language of lecture</p>	<p>English</p>

International Summer University 2024
Module: Process Improvement
Level: Undergraduate /Bachelor



HOCHSCHULE OSNABRÜCK
UNIVERSITY OF APPLIED SCIENCES

Promoter of the module	
Module instructor/Home university	Dr. Marco Lara Garcia, University of Southern Indiana, USA
Hours all in all a) Time spent in classroom b) Time spent outside classroom	Hours all in all: 150 hours a) 60 hours b) 90 hours: Time for preparation: 45 hours, Time for literature studies: 45 hours
ECTS-Credits	5