



**JORDAN UNIVERSITY OF SCIENCE AND
TECHNOLOGY
INDUSTRIAL ENGINEERING DEPARTMENT**



Course Number and Name	PDDE 423: Concurrent Engineering
Course Description	This course adopts a project-based learning method to teach design teams how to simplify product structure to reduce manufacturing and assembly costs, quantify improvements and how robustly design concepts for ensuring quality. Concepts such as modular design, design for manufacturing, assembly, reliability, and environment among others are covered. Axiomatic design and the theory of inventive problem-solving, also called TRIZ, to create creative ideas and solve design contradictions are also covered. Case studies are heavily discussed in this course.
Credits and contact hours	3 Credit hours; 3 hours of lectures
Pre- or Co-requisites	PDDE 340: Machine Element Design and Selection PDDE 342: Introduction to Hydraulic and Pneumatic Systems PDDE 360: Components Selection in Electric System Design Concurrent IE468 (Manufacturing Processes 2)
Required/ Elective	Required

Instructor	Dr. Mohammed S. Obeidat
Office Location	E1 L2
Email	msobeidat1@just.edu.jo
Office Hours	TBA or by official appointment

Text Book(s)	Grieves, Michael (2015), Product Lifecycle Management: Driving the Next Generation of Lean Thinking: Driving the Next Generation of Lean Thinking, 1st edition, McGraw Hill.
References	Hartley , John R. 1998. Concurrent Engineering Shortening Lead Times, Raising Quality, and Lowering Costs. 1st edition, Productivity Press

Course Objectives	At the end of this course on Concurrent Engineering (CE) the student will understand: • The current trends in CE. 2. • The potential scope of CE within an organization.
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	• The importance of rapid cross-departmental communication. • The role of computers in implementing CE.
Measured Outcomes	1, 2, 5, 6, 7

Week	Topics to be Covered
1-5	Topics in Concurrent Engineering (CE)
6-12	Topics in Product Lifecycle Management (PLM)
13-14	Project presentations

Assessment Tools:

	Weight	Day and Date
First Exam	20%	TBA
Second Exam	20%	TBA
Project	20%	Last 2 weeks
Final Exam	40%	TBA