DHBW
Duale Hochschule
Baden-Württemberg

Production and Information Management (T3IPE3003)

Formale Angaben zum Modul		
Studiengang	**Studienrichtung**	**Vertiefung**
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Modulbezeichnung	**Sprache**	**Nummer**	**Version**	**Modulverantwortlicher**
Production and Information Management	Englisch	T3IPE3003	1	Prof. Dr. Stephan Hähre

Verortung des Moduls im Studienverlauf			
Semester	**Voraussetzungen für die Teilnahme**	**Modulart**	**Moduldauer**
3. Stj.		-	1

Eingesetzte Lehr- und Prüfungsformen	
Lehrformen	Seminar, Vorlesung
Lehrmethoden	Lehrvortrag, Diskussion, Gruppenarbeit

Prüfungsleistung	**Prüfungsumfang (in min)**
Klausurarbeit (K),	90
Beschreibung Prüfungen	
Written Exam with (optional) seminar and lab seminar	

Workload und ECTS			
Workload insgesamt (in h)	**davon Präsenzzeit (in h)**	**davon Selbststudium (in h)**	**ECTS-Punkte**
150,0	54,0	96,0	5

Qualifikationsziele und Kompetenzen	
Fachkompetenz	- Understanding of the potential and challenges of integration of human, machines, assets and automation components by information technology, especially regarding realization of business processes in companies. - Overview over selected Business-IT-Systems, their usage and benefits – including newest trends (Cloud Computing, Big Data und Mobile Computing). - Know-How regarding existing and upcoming scenarios in production, service management/maintenance and Quality Management/Energy Management including challenges and limits. - Discussion of Key-Performance-Indictor (KPI) models and examples and understanding of the technological and process requirements in current production strategies. - Insights in Case-Studies for interdisciplinary scenarios and transfer into the industrial practice – from the IT view, process view and user view.
Methodenkompetenz	Students are enabled to define and develop own creative ideas to solve current complex problems in the industry
Personale und Soziale Kompetenz	The students experience the value of interdisciplinary and team-oriented thinking, hands-on by definition and implementation of competitive business processes in producing companies
Übergreifende Handlungskompetenz	Find solution approaches for specific challenges in companies and learn the importance of teamwork and cross-area collaboration to implement and transfer solutions

Lerneinheiten und Inhalte		
Lehr- und Lerneinheiten	**Präsenz**	**Selbststudium**
Business Information Systems in Production and Logistics	**32,0**	**50,0**
- Basic Concepts in Business Information Management and Business Systems Architecture - Key areas and processes in companies - Overview Production Management - Main Examples of Business Systems in Production & Logistics: ERP, MES, WMS, PLM, Business Intelligence/KPI Management - SAP ERP Practice (PP, SD, MM)		
Advanced Concepts in Production Management	**8,0**	**16,0**
- Industry 4.0 and Industrial Internet – Introduction and Trends - I40 Application Use Cases (Research Projects & Industry Practice) Examples: Resilient Production, Tracking & Tracing, Augmented Reality, Predictive Maintenance, Demand-Side Energy Management - New Business Models - Concepts of Lean Production		
Interdisciplinary Seminar & Lab Practice	**14,0**	**30,0**
- FIM Lab Seminar - Production & IT - Vertical and Horizontal Information Integration in Manufacturing & Logistics - Practice on ERP, MES, SCADA, Automation - Scenarios & Use Cases in different application areas		

Besonderheiten und Voraussetzungen
Besonderheiten
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Voraussetzungen
- Basics in computer science/information management and engineering - Principle knowledge of processes in production & logistics

Literatur
- Schmelzer, H.J., Sesselmann W.: Geschäftsprozessmanagement in der Praxis: Kunden zufrieden stellen, Produktivität steigern, Wert erhöhen, Carl Hanser Verlag - Benz, J.: Logistikprozesse mit SAP, Vieweg + Teubner Verlag - Kletti, J.: Manufacturing Execution System – MES, Springer-Verlag - Schulz, H.-J., Gebhardt, B.: Product Lifecycle Management für die Praxis: Ein Leitfaden zur modularen Einführung, Umsetzung und Anwendung, Springer-Verlag - Bracht, U.; Geckler, D.; Wenzel, S.: Digitale Fabrik: Methoden und Praxisbeispiele (VDI-Buch)
- Bauernhansl, Thomas, ten Hompel, Michael, Vogel-Heuser, Birgit (Hrsg.); Industrie 4.0 in Produktion, Automatisierung und Logistik (Springer 2014)
Own Script (Scenario description)