

**FACULTY OF ENGINEERING  
STUDY COURSE DESCRIPTION**

<b>Course Title:</b>	<b>Organization of production and services</b>				
<b>Course code (LAIS):</b>	<i>The course will be registered in the study administration system after accreditation</i>				
<b>Study programme:</b>	<b>Mechatronics</b>				
<b>Level of Study programme:</b>	<input type="checkbox"/>	1st level professional higher education			
	<input checked="" type="checkbox"/>	Professional Bachelor			
	<input type="checkbox"/>	Professional Master			
	<input type="checkbox"/>	Academic Master			
	<input type="checkbox"/>	PhD level			
<b>Type of Study programme:</b>	<input type="checkbox"/>	Compulsory course (Part A)			
	<input checked="" type="checkbox"/>	Professional specialization courses (Part B, compulsory)			
	<input type="checkbox"/>	Professional specialization optional courses (Part B, optional)			
	<input type="checkbox"/>	Elective courses (Part C)			
<b>Course Workload:</b>	<b>Credits</b>	<b>ECTS</b>	<b>Academic hours</b>	<b>Contact hours</b>	<b>Independent work hours</b>
	2	3	80	32	48
<b>Course Author/ Tutor:</b>	<b>Alvis Sokolovs</b>				
	Lecturer, Dr.sc.ing.				
	e-mail: alvis.sokolovs@va.lv				
	Consultation: according to the schedule for each semester				
<b>Study Form:</b>	Full time studies				
<b>Study year, semester:</b>	3 <sup>rd</sup> year 6 <sup>th</sup> semester				
<b>Language:</b>	Latvian, English				
<b>Prerequisites for the Course:</b>	-				
<b>Course Summary:</b>	The aim of the course is to introduce LEAN principles in manufacturing, to demonstrate the use of various tools for production and service planning. Within the framework of each lecture, the following individual work assignments are defined - literature analysis, internet resource exploration and analysis, video content, amount and necessary materials (literature, internet resources, video materials) for completion of each lecture.				
<b>Assessment:</b>	Exam				
<b>Requirements for Credits:</b>	Practical works must be prepared and delivered within the time set by the lecturer. 100% attend seminars and workshops (missed classes can be completed individually). Positive assessment is required for all tests.				
	The final mark of the course consists of: 20% for individual work seminars and workshops, Exam 80%				
<b>Abiding by the Academic Ethics</b>	Students must abide by the academic and research ethics, Vidzeme University of Applied Sciences Ethics Regulations, incl.:				
	<ul style="list-style-type: none"> <li>- study papers must be independently developed;</li> <li>- the study work should reference all statements, ideas and data used that have been authored by someone else;</li> <li>- appropriate data acquisition methods should be used in the acquisition of data, the research ethics must be respected, empirical data must be collected independently and cannot be distorted or falsified;</li> <li>- the examination must be carried out by the student independently, without the use of supporting materials and/or consultations with other students, unless the lecturer states otherwise.</li> </ul> <p>In the event of non-compliance with the academic and research ethics, punishment is imposed in accordance with the ViA Ethics Regulations and the study course must be re-taken, unless the punishment is exmatriculation.</p>				
<b>Learning Outcomes; the evaluation methods and criteria</b>	<b>Learning Outcomes</b>		<b>The evaluation methods and criteria</b>		
	<b>Knowledge</b>				
	Production processes, levels of organization,			Practical work, individual work, test.	

	tools for process organization	
	LEAN principles, LEAN tools for production management	Practical work, individual work, test.
	Production modeling	Practical work, individual work, test.
	<b>Skills</b>	
	Use of at least 5 LEAN tools	Practical work, individual work, test.
	Planning and organization of production processes	Practical work, individual work, test.
	<b>Competency</b>	
	Planning and organization of operational work.	Practical work, individual work, test.
	Modeling of production processes	Practical work, individual work, test.
<b>Course Compulsory literature:</b>	<p>1. J.Vārna. Ražošanas organizēšana. Apgāds "Valters un Rapa", 2004.g.                  2. Rūrāne M. Uzņēmējdarbības pamati. R.: Turības mācību centrs, 1997.                  3. Andra Zvirbule-Bērziņa. Plānošana un ražošanas procesa organizēšanas pamatprincipi. Biznesa augstskola Turība, 2004.g.                  4. M. Schenk, S. Wirth, E. Muller, Factory planning manual, Situation-driven production facility planning, Springer, 2010</p>	
<b>Course additional literature:</b>	<p>1. William J. Stevenson. Production / Operations Management, 6. Edition - Boston: Irwin Mcgraw - Hill. - 1999.                  2. Jay Heizer/Barry Render.Principles of Operations Management. - New Jersey: Prentice Hall. - 2000.                  3. C. Karrer, Engineering Production Control Strategies, A guide to Tailor Strategies that unite the Merits of Push and Pull, Springer, 2012</p>	
<b>Course confirmation date:</b>	08.12.2022	
<b>Date of course description update:</b>		

### Study Course Plan:

Date	Theme	Academic hours		Study Form/ Organization of independent work of students and task description
		Contact hours	Independent work hours	
<i>The date is specified before the implementation of the course</i>	Introduction - familiarization with the course content and procedure; definition of terms used in the course and formulation of tasks; division into groups	6	12	lecture, literature and video materials
	Analysis of production levels and processes	6	12	lecture, literature analysis; group work
	Modeling and planning of production processes	8	12	lecture, literature analysis, video materials; group work
	LEAN tools for production management	10	12	lecture, literature analysis, video materials; group work
	Final test	2		Exam
	<b>Hours total:</b>	<b>32</b>	<b>48</b>	