

Management and production engineering – 3 semester

Lp.	Subject	Description	Semester	ECTS credits	Number of hours for the form of education						Form of passing	
					Lecture	Exercise	Practical classes	ZK	PS	PZ	Exam	Credit
1.	Mathematical statistics	Students will learn the basic concepts of macroeconomics. They will acquire the ability to search for relevant information in this field on the Internet. They will understand the causes of macroeconomic phenomena.	3	3	15	15	15				-	x
2.	Descriptive statistics	Introducing the student to the terminology of statistics, basic issues in statistics, analysis of community structure, statistical tests and linear regression. They will learn to put theory into practice and acquire the ability to make appropriate groupings of data. They will make calculations to process data, present them graphically. They will learn to use Excel in statistics.	3	3	15	15	15				-	x
3.	Innovation management	To provide students with theoretical and practical knowledge about innovation activities in the enterprise, innovation support and consumer behaviour towards innovation. To develop attitudes aimed at building relationships and taking	3	3	15	-	30				-	x

		responsibility for decisions. To develop the ability to search for innovative solutions and to critically evaluate them for implementation in an enterprise.										
4.	Business models	To provide students with theoretical and practical knowledge of how businesses operate based on different business models. To familiarise students with the construction and application of business models. To develop the ability to recognise, diagnose, analyse and interpret phenomena in the environment and to use the knowledge gained to choose a business model.	3	3	15	30	-				-	x
5.	Fundamentals of machine design I	To provide students with basic knowledge of mechanical engineering; to familiarise them with computer-aided design (CAD), standardisation issues and EU requirements in the area of mechanical engineering. To familiarise students with the most common methods of joining components and the construction of universal machine assemblies (e.g. couplings, gears). To develop the ability to construct simple machine elements and assemblies and to create constructional documentation.	3	3	15	30	-				-	x
6.	Design of technological processes	Students will learn the basis of process design of machine parts. They will acquire the ability to apply	3	5	30	30	15				-	x

		various machine technologies in process design.										
7.	Fundamentals of marketing	Impart knowledge of the basics of marketing. To familiarize students with the tools used in the marketing activities of companies. To facilitate an understanding of the mechanisms by which enterprises operate in the market.	3	4	30	-	30				x	-
8.	Computer design (CAD)	Learning about methods for advanced 3D modelling of machine parts and plastic products and their presentation through animation and rendering. Familiarisation with the basic possibilities of performing engineering calculations in CAD systems. To acquire the practical skill of preparing drawings, diagrams, plans, etc. using vector graphics.	3	2	-	-	30				-	x
9.	Financial accounting	To acquire knowledge of the principles of accounting, and in particular of the process of measuring and recording economic events and operations. To acquire by the student the skills of accounting records of typical operations occurring in an economic unit. To learn the basic principles of preparing and interpreting financial statements. Students will acquire the ability to estimate (forecast) the initial costs, current costs and revenues of business operations and to determine the profit and loss account.	3	4	30	15	15				x	-

10.	Ergonomics	To provide students with theoretical and practical knowledge of the development of safe and ergonomic working conditions, especially - in industrial and service enterprises, in manufacturing and service processes. To teach measurement techniques for assessing the most important ergonomic factors. Developing the ability to critically observe work processes from the point of view of safety and ergonomics and the ability to design changes in the design of equipment and organisation of work, ensuring ergonomics and safety.	3	2	15	15	15				-	x
	Total:			32 ECTS								