

## 18. Production economics

GENERAL INFORMATION ABOUT THE COURSE		
Course coordinator	Goran Kozina, PhD, professor	
<b>Course name</b>	<b>Production economics</b>	
Study program	<b>Mechanical Engineering</b>	
Course status	Compulsory	
Year	1	
Semester	1	
Number of credits and teaching methods	ECTS student load coefficient	4
	Number of hours (lectures + seminars + exercises)	15+15+15

### 1. DESCRIPTION OF THE COURSE

#### 1.5. Course objectives

Familiarising students with fundamental indicators of production as well as tools for analysis and making optimal decisions based on such indicators. Given that production is the central area of study in mechanical engineering, it is essential to become familiar with economic laws in the area of production, relationship between investing - production factors - results, issues relating to costs and results, and achieved business results and production.

#### 1.6. Course enrolment prerequisites (*if applicable*)

None

#### 1.7. Expected course learning outcomes

After completing the course and passing the exam, students will be able to:

1. Recognising the role and importance of management bodies in companies.
2. Evaluating the relationship of business decisions in companies and business decisions directed outside the company.
3. Determine conditions for demand and supply, as well as evaluating the position of the company on the market.
4. Define business strategies, including costs, price, product / service differentiation on the market as well as market conditions according to type of product and market structure.
5. Formulating problems in the business sector on the basis of systematic theoretical analysis.
6. Proposing optimal business decisions by applying economic, mathematical and statistical concepts.

## 1.8. Course content

1. Introduction, enterprises as elements of the market system
2. Theory of production and short-run production function
3. Fundamental rules for demand and supply, demand variability, estimation of demand and forecasts
4. Theory and estimation of production
5. Laws of productivity. Production zones. Fixed factor and short-run production function.
6. Concept of the long-run production function.
7. Optimal combination of factors. Expansion trajectories. Capacity. Theory of adjustment.
8. Price theory and estimation. Cost theory.
9. Behaviour of variable, fixed and total costs in the short term.
10. Long run costs.
11. Price of products /serves as a function of market position
12. Special cases in pricing.
13. Competing company equilibrium.
14. Critical points in the business of a company.
15. Analysis of coverage point

1.9. Types of teaching	<input checked="" type="checkbox"/> Lectures	<input checked="" type="checkbox"/> Autonomous exercises					
	<input type="checkbox"/> Seminars and workshops	<input type="checkbox"/> Multimedia and network					
	<input checked="" type="checkbox"/> Exercises	<input type="checkbox"/> Laboratory					
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Mentor assistance					
	<input type="checkbox"/> Field work	<input type="checkbox"/> Other types					
1.10. Comments							
1.11. Student obligations ( <i>attendance at classes, lectures, tutorials, seminars</i> )							
1.12. Tracking student work (proportion of individual activities in terms of ECTS credits based on the total number of ECTS credits)							
Class attendance	0.5	Class participation	0,5	Seminar paper	1	Experimental work	
Written exam	1	Oral exam	1	Essay		Research	
Project		Continual assessment of knowledge		Written seminar paper		Practical work	
Online activity							
1.13. Grading and assessment of student work during the semester and for the final exam ( <i>interim exam, written exam, oral exam</i> )							

**1.14. Mandatory literature** (relevant at the time of submitting the proposed study program)

- P. G. Keat, P. K. Y. Young, S. Banerjee: Managerial economics – economic tool for today's decision makers, Pearson Education, 6th Ed, 2013

**1.15. Supplementary literature** (relevant at the time of submitting the proposed study program)

- <http://ocw.mit.edu/courses/economics>

**1.16. Manner of tracking quality to ensure the acquisition of exit knowledge, skills and competences**

**2. COMBINING THE LEARNING OUTCOMES, TEACHING METHODS AND ASSESSMENT OF THE LEARNING OUTCOMES**

<i>2.1. Class participation</i>	<i>2.2. Student participation</i>	<i>2.3. Learning outcome</i>	<i>2.4. Assessment method</i>