

Name subjects :		Management of technological development and modern technology		
Code subjects	Case status	Semester	Number of ECTS credits	Number of lessons (weekly)
PO3MTRST	Required	V	6	2P+2V

Studio programs for organized by : Polytechnic , general studies

Conditionality other Subjects : None .

Idea studies subjects : Idea studies subjects is that students through analytical access meet with basic principles contemporary technology , innovations and technological development . Contemporary technological development and application new state-of-the-art technologies in production and serviceable activities , application of new Digital twins technologies in contemporary processes .
“ Management technologies and contemporary technologies ” provides comprehensive insight into key aspects management technology , innovations and digital transformation in modern The focus is on integration new technology in industrial and business processes , strategic management technological resources and bringing decision based on data .

Goals studies subjects .

- Understanding basic principles management technologies and his/her importance for competitiveness companies .
- Analysis influence contemporary technology (automation , artificial intelligence , IoT , blockchain , green technologies) on different sectors economy .
- Developing strategy for efficiently management technological innovations and processes digital transformations .
- Study practical examples successful technological models in the industry and business sector .

Outcomes learning :

A student who successfully overcome this one subject , will be able to :

1. Understands basic principles management technologies and his role in modern business and industrial processes ;
2. Analyzes influence new technology (automation , artificial intelligence , IoT , blockchain , green technologies) on different sectors economy ;
3. Develops strategies for technological innovation and implementation contemporary technology in companies ;
4. Apply methods digital transformations for promotion business process and efficiency organization ;
5. Develops analytical and research abilities through studies cases , projects and practical tasks tied for management technologies .

Name and last name teacher and Associate : Prof. Dr. Athanasius Kochov

Method teaching and overcoming materials : Combination theoretical lectures , studies cases , practical exercises and group discussion will enable for participants to gain concrete knowledge and skills applicable in real life business environment .
lectures , exercises , tests .

WORK PLAN

Sunday : Name methodological unit for lectures (L), exercises (V) and others teaching contents (O); Planned shape checks knowledge (Pz)

Preparatory Sunday		Introduction , preparation and enrollment semester .
And Sunday	P/V	Basic principles management technologies
II	P/V	Innovations and digital transformation
III	P/V	Industry 4.0 and smart technologies
IV	P/V	Green and sustainable technologies
V	P/V	Role artificial intelligence and mechanical learning
VI	P/V	Technological entrepreneurship and startup ecosystem
VII	P/V	Analysis data and bringing strategic decision
VIII	P/V	Digital twin driven smart manufacturing
IX	PZ	Colloquium
X	P/V	Digital twin driven smart design
XI	P/V	Sustainable development based on contemporary technologies
XII	P/V	Contemporary concept CAx (Computer Aided x)
XIII	P/V	Advanced technologies - Rapid prototyping
XIV	P/V	Lean management & Six Sigma
XV	P/V	Recapitulation materials .
XVI	PZ	Final exam .
XVII		Verification semester and enrollment rating
XVIII		Correctional exam deadline

Obligations student in progress classes : lectures , exercises , tests .

Consultations by e- mail : YES

Load student

Sunday :

6 credits x 40/30 = 8 hours

Structure :

2 hours lectures

2 hours exercises

4 hours independent work , including and consultations .

In the semester :

Total burden for subject 6x30 = 180h

Structure :

Teaching and final exam : 8 hours x 16 weeks = 128 hours

Necessary preparations before beginning semester (administration , enrollment , certification) : 8hx2=16h

Supplementary work for preparation and laying remedial exam time : 0-36h

Literature :

- Robert Burgelman , Clayton Christensen, Steven Wheelwright Strategic **Management of Technology and Innovation** ; McGraw-Hill, New York, 2018
- Robert Johnston, Stuart Chambers, Christine Harland, Alan Harrison and Nigel Slack **Cases in operations management** Pearson Education Limited 2013
- Soheil Sabri , Kostas Alexandridis , Newton Lee: **Digital Twin Fundamentals and Applications** , Springer 2020

Shapes checks knowledge and evaluation :

Tests 20%, midterm exam 40% and exam 40%.

Rating	A	B	C	D	E
Number point	90-100	80-89	70-79	60-69	50-59