Course description

Course abbreviation:	KMM/ETP		**Page:**	1 / 3
Course name:	Ecology of Technological Processes			
Academic Year:	2023/2024		**Printed:**	03.06.2024 07:08

Department/Unit /	KMM / ETP			**Academic Year**	2023/2024
Title	Ecology of Technological Processes			**Type of completion**	Exam
Accredited/Credits	Yes, 4 Cred.			**Type of completion**	Combined
Number of hours	Lecture 2 [Hours/Week] Seminar 1 [Hours/Week]				
Occ/max	Status A	Status B	Status C	**Course credit prior to**	YES
Summer semester	0 / -	9 / -	2 / -	**Counted into average**	YES
Winter semester	0 / -	0 / -	0 / -	**Min. (B+C) students**	10
Timetable	Yes			**Repeated registration**	NO
Language of instruction	Czech			**Semester taught**	Summer semester
Optional course	Yes			**Internship duration**	0
Evaluation scale	1|2|3|4			**Ev. sc. – cred.**	S|N
No. of hours of on-premise					
Auto acc. of credit	Yes in the case of a previous evaluation 4 nebo nic.				
Periodicity	K				
Substituted course	None				
Preclusive courses	N/A				
Prerequisite courses	N/A				
Informally recommended courses	N/A				
Courses depending on this Course	KMM/ZSZT2				

Course objectives:

The course presents an introduction to ecology and the impact of industrial processes on the environment. Main attention is paid to solid, liquid and gaseous pollutants and their elimination in various industrial branches. The course also explains the risks of occupational diseases and emphasizes the need for an appropriate microclimate in workplaces.

Requirements on student

Requirements for the successful completion of the course:
Continous assesssment: Individual asignmenst
Final assessment: combined examination (oral)

Content

Introduction to environment, ecological notions. Main problems of environment. Protection atmosphere. Problems liquidation impurities of air. Waters purity protection . Problems of oil substances and wastes from workroom of surface processing. Solid waste. Waste management. Ionic radiation protection and noise protection. Microclimate modification and lighting in the workplace. Influences of technologies on environment. Vocational diseases.

Fields of study

Guarantors and lecturers

- **Guarantors:** Doc. Ing. Olga Bláhová, Ph.D. (100%)
- **Lecturer:** Ing. Pavla Bartoň Klufová, Ph.D. (100%), Ing. Martin Bystrianský, Ph.D. (100%)
- **Tutorial lecturer:** Ing. Pavla Bartoň Klufová, Ph.D. (100%), Ing. Martin Bystrianský, Ph.D. (100%)

Literature

- **Basic:**   Kraus V. *Ekologie technologických pochodů*. ZČU Plzeň, 1997.
- **Recommended:**   Tchobanoglous, G. *Wastewater Engineering: Treatment and Resource Recovery*. 2013. ISBN 978-0073401188.
- **Recommended:**   Coopers and Lybrand. *Your Business and the Environment*. London, 1991.
- **Recommended:**   Edward Glaeser. *3) Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier,*. 2012. ISBN 978-0143120544.

Time requirements

All forms of study

Activities	Time requirements for activity [h]
Preparation for comprehensive test (10-40)	10
Preparation for formative assessments (2-20)	16
Contact hours	20
Practical training (number of hours)	10
Preparation for an examination (30-60)	40
Total:	**96**

assessment methods

Knowledge - knowledge achieved by taking this course are verified by the following means:

Oral exam

Test

Skills - skills achieved by taking this course are verified by the following means:

Seminar work

Test

Competences - competence achieved by taking this course are verified by the following means:

Combined exam

Test

prerequisite

Knowledge - students are expected to possess the following knowledge before the course commences to finish it successfully:

Basic knowledge from chemistry and physical science.

Skills - students are expected to possess the following skills before the course commences to finish it successfully:

Students should be able to have basic laboratory skills.

Competences - students are expected to possess the following competences before the course commences to finish it successfully:

N/A

N/A

teaching methods

Knowledge - the following training methods are used to achieve the required knowledge:

Lecture with a video analysis

Interactive lecture

Practicum

Collaborative instruction

Multimedia supported teaching

Skills - the following training methods are used to achieve the required skills:

Multimedia supported teaching

Practicum

Competences - the following training methods are used to achieve the required competences:

Multimedia supported teaching

Practicum

Lecture

learning outcomes

Knowledge - knowledge resulting from the course:

Student after course passing should:
Know ecological notions and main problem of environment.
Have an overview about types of dust separators etc.
Control of solid wastes liquidation method.
Understand problems of microclimate at the workplace.

Skills - skills resulting from the course:

Students will be able to design production processes in line with ecology and safety.

Competences - competences resulting from the course:

N/A

N/A

Course is included in study programmes:

Study Programme	Type of	Form of	Branch	Stage	St. plan v.	Year	Block	Status	R.year	R.
Certifikátové programy	Postgraduate Master	Full-time	Industrial Design	1	1	2023	Core elective courses	B		LS
Industrial Engineering and Management	Postgraduate Master	Combined	Industrial Engineering and Management	1	2020	2023	Povinně volitelné př. 1. roč. LS	B	1	LS
Industrial Engineering and Management	Postgraduate Master	Full-time	Industrial Engineering and Management	1	2020	2023	Povinně volitelné př. 1. roč. LS	B	1	LS
Materials Science and Manufacturing Technology	Postgraduate Master	Combined	Materials Science and Manufacturing Technology	1	2020	2023	Core elective courses	B	1	LS
Materials Science and Manufacturing Technology	Postgraduate Master	Full-time	Materials Science and Manufacturing Technology	1	2020	2023	Core elective courses	B	1	LS
Certifikátové programy	Postgraduate Master	Full-time	Corrosion engineering	1	1	2023	Doporučené volitelné	C		LS
Certifikátové programy	Postgraduate Master	Full-time	Design and production of welded structures	1	1	2023	Elective courses	C		LS