

Course description

Course abbreviation:	KME/SZKPB	Page:	1 / 3
Course name:	SE Struct. and Envir. of Modern Building		
Academic Year:	2023/2024	Printed:	03.06.2024 07:26

Department/Unit /	KME / SZKPB			Academic Year	2023/2024
Title	SE Struct. and Envir. of Modern Building			Type of completion	State Final Exam
Long Title	SE Structures and Environment of Modern Buildings				
Accredited/Credits	Yes, 0 Cred.			Type of completion	
Number of hours					
Occ/max	Status A	Status B	Status C	Course credit prior to	NO
Summer semester	9 / -	0 / -	0 / -	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	Winter, Summer
Optional course	Yes			Internship duration	0
Evaluation scale	1 2 3 4				
No. of hours of on-premise	0				
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	N/A				

Course objectives:

The main objective of the State Exam in Structures and Environment of Modern Buildings is to verify that student

- successfully mastered the knowledge of design and realisation of modern buildings and their structures, including their reconstruction and modifications, using modern materials and technologies, and respecting the requirements for the quality of the internal environment,
- actively uses computational procedures and professional software for design and optimization of selected solutions,
- has the necessary professional skills, knowledge and competence from relevant expertise.

Requirements on student

When assessing the state examination, the acquired competencies from relevant professional areas are assessed.

Content

The State Exam in Structures and Environment of Modern Buildings is based mainly on study subjects:

- Progressive materials and constructions of buildings
- Progressive construction technologies
- Thermal protection of buildings
- Building Acoustics and Daylighting
- Reconstruction and diagnostics of modern buildings

Fields of study

Guarantors and lecturers

- **Guarantors:** Doc. Ing. Jan Pašek, Ph.D.

Literature

- **Basic:** ČSN EN 199x Eurokódy.
- **Basic:** ČSN EN 730540 Tepelná ochrana budov.
- **Basic:** Legislativní a normové předpisy v oblastech stavební akustiky a denního osvětlení staveb.
- **Basic:** Mercader-Moyano, P. *Sustainable Development and Renovation in Architecture, Urbanism and Engineering*. Springer, 2017. ISBN 978-3-319-51442-0.
- **Recommended:** FU, F. *Advanced Modelling Techniques in Structural Design*. Wiley-Blackwell, 2015. ISBN 978-1-118-82545-7.
- **Recommended:** Pacheco Torgal, F., Jalali, S. *Eco-efficient Construction and Building Materials*. Springer, 2011. ISBN 978-0-85729-892-8.
- **Recommended:** Athienitis, A., O'Brien, W. *Modeling, Design, and Optimization of Net-Zero Energy Buildings*. John Wiley and Sons, Inc., 2015. ISBN 978-3-433-60465-6.

assessment methods

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

Oral exam

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

Oral exam

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

Oral exam

prerequisite

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

Student must complete all prerequisites required by the study plan of the Civil Engineering - Modern Buildings study program and all conditions specified by the Study and Examination Regulations of the University of West Bohemia in Pilsen.

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

Student must complete all prerequisites required by the study plan of the Civil Engineering - Modern Buildings study program and all conditions specified by the Study and Examination Regulations of the University of West Bohemia in Pilsen.

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:

Individual study

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

Individual study

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

Individual study

learning outcomes

Knowledge - knowledge resulting from the course:

By successfully completing the state final examination, the student has demonstrated that he has acquired sufficient knowledge in the course of his studies in accordance with the requirements of the study program Civil Engineering - Modern Buildings, specialization Design and Construction of Buildings.

Skills - skills resulting from the course:

By successfully completing the state final examination, the student has demonstrated that he has acquired sufficient skills in the course of his studies in accordance with the requirements of the study program Civil Engineering - Modern Buildings, specialization Design and Construction of Buildings.

Competences - competences resulting from the course:

N/A

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.
Civil Engineering	Postgraduate Master	Full-time	Navrhování a provádění budov	1	2020	2023	Specializační státnicové předměty	A	2	LS