

Course description

Course abbreviation:	KME/UDS	Page:	1 / 3
Course name:	Introduction to Construction Engineering		
Academic Year:	2023/2024	Printed:	01.06.2024 09:30

Department/Unit /	KME / UDS			Academic Year	2023/2024
Title	Introduction to Construction Engineering			Type of completion	Pre-Exam Credit
Accredited/Credits	Yes, 3 Cred.			Type of completion	
Number of hours	Lecture 2 [Hours/Week] Tutorial 1 [Hours/Week]			Course credit prior to	NO
Occ/max	Status A	Status B	Status C	Counted into average	NO
Summer semester	0 / -	0 / -	0 / -	Min. (B+C) students	1
Winter semester	0 / -	0 / -	0 / -	Repeated registration	NO
Timetable	Yes			Semester taught	Winter semester
Language of instruction	Czech			Internship duration	0
Optional course	Yes				
Evaluation scale	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	N/A				

Course objectives:

Student will be acquainted with the principles of creation of construction technical documentation and basic principles of structural elements of buildings.

Requirements on student

Requirements for credit:

Student will create semester task in a satisfactory quality and successfully pass the written test.

Content

1. Building and construction requirements imposed on it. Types of buildings. Structural systems of buildings.
2. Building components and their drawings. Basic requirements for drawings, formats, display (perspective, graphical, schematic representation).
3. The vertical load-bearing structures. Drawing of vertical structures in the technical documentation.
4. Horizontal load-bearing structures. Drawing of structural shape, drawing of structural composition. Drawing of structural scheme.
5. Staircases. Drawing of staircases in the technical documentation.
6. Basic structural details of bearing structures. Drawing of details.
7. Foundations of buildings. Drawing of foundation in the technical documentation.
8. Roof structures of buildings. Basic details of roof trusses and flat roofs. Drawing of roofs structures in the technical documentation.

9. Facade openings fillings and their drawings.
10. Final completion structures and their drawings. Facade structures, partitions, floor structures.
11. Masonry structures. Reinforced concrete structures. Timber structures. Steel structures.
12. Technical documentation of buildings (types, drawings in the technical documentation, including drawings for special purposes).
13. Technical documentation of buildings under the Building Act (graphic and text part).

Fields of study

Guarantors and lecturers

- **Guarantors:** Doc. Ing. Jan Pašek, Ph.D. (100%)

Literature

- **Recommended:** Hapl L., Vejvara L. *Učební texty KME pro obor stavitelství SA 1..*
- **Recommended:** Hapl L. *Učební texty KME pro obor stavitelství SA 2..*

Time requirements

All forms of study

Activities	Time requirements for activity [h]
Undergraduate study programme term essay (20-40)	40
Contact hours	39
Total:	79

assessment methods

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

Skills demonstration during practicum

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

Skills demonstration during practicum

Seminar work

Test

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

Skills demonstration during practicum

prerequisite

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

disponovat základními znalostmi matematiky

disponovat základními znalostmi fyziky

disponovat základními znalostmi chemie

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

transformovat prostorové objekty do dvojrozměrného zobrazení
zpracovat základní geometrické a grafické úlohy

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

Lecture
Practicum
Self-study of literature
Individual study

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

Lecture
Practicum
Self-study of literature
Individual study

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

Lecture
Practicum
Self-study of literature
Individual study

learning outcomes**Knowledge - knowledge resulting from the course:**

orientovat se struktuře stavebně technické dokumentace
orientovat se ve způsobech zakreslování jednotlivých konstrukcí do stavebních výkresů: půdorysů, řezů a pohledů stavby
orientovat se ve čtení výkresů: půdorysů, řezů a pohledů stavby a ve značení stavebních materiálů na výkresech
vyjmenovat a popsat funkce základních nosných a nenosných prvků stavebních objektů

Skills - skills resulting from the course:

charakterizovat vlastnosti stavebního objektu zobrazeného ve výkresových přílohách technické dokumentace
provést zakreslení stavební konstrukce v půdorysu, řezu a pohledu
vytvořit pod vedením výkresové přílohy dokumentace pro jednoduchou stavbu (rodinný dům)
slovně charakterizovat stavebně technické řešení jednoduché stavby

Competences - competences resulting from the course:

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	Bachelor	Full-time	Building Structures	1	2022	2023	Povinně volitelné předměty	B	1	ZS
Civil Engineering	Bachelor	Full-time	Building Structures	1	2023	2023	Povinně volitelné předměty	B	1	ZS
Civil Engineering	Bachelor	Full-time	Building Structures	1	2018	2023	Povinně volitelné předměty	B	1	ZS