Course description

Department/Unit /	KGM / MAP			**Academic Year**	2023/2024	
Title	Mapping			**Type of completion**	Exam	
Accredited/Credits	Yes, 4 Cred.			**Type of completion**		
Number of hours	Lecture 2 [Hours/Week] Tutorial 1 [Hours/Week]					
Occ/max	Status A	Status B	Status C	**Course credit prior to**	YES	
Summer semester	0 / -	0 / -	0 / -	**Counted into average**	YES	
Winter semester	1 / -	0 / -	0 / -	**Min. (B+C) students**	1	
Timetable	Yes			**Repeated registration**	NO	
Language of instruction				**Semester taught**	Winter 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	KMA/MAP					
Preclusive courses	N/A					
Prerequisite courses	N/A					
Informally recommended courses	N/A					
Courses depending on this Course	N/A					

Course objectives:

Aim of the subject will be to get acquitance students with following topics:
History of creating the maps and plans at large scales.- Cadastral mapping based on scientific knowledge (Stable cadastre, Land cadastre in the Czechoslovak Republic, Instruction ?A?). Application of the results of large mapping to compilation of topographical
maps. State map of the Czechoslovak Republic. Technical-Economical Mapping. Maintenance and updating of large scale maps. The Large Scale Basic Map. Thematic large scale maps (cadastral map, Basic Town Map, Uniform Railway Map, Basic Motorway Map, Basic Airport Map, Basic Factory Map). Geodetic documentation of completed constructions. Survey sketch and its signification for maintenance and updating of cadastral maps.

Requirements on student

Credit: Submitting of semestral paper on given topic
Examination:
Written part: test of knowledge of fundamental concepts and their applications
Oral part: applications of mapping methods and their implementation to creating of State maps series in the Czech Republic

Program of excercises contains creation of a survey sketch and all documents neede for its certification. Each student prepars his own semestral paper on given topic and presents personally the results of his activities.

Content

1. Definitions of fundamental concepts and terminology in mapping
2. Development of cartographic foundations in the Czech Lands
3. Surveyors and first land registrations in the Czech Lands
4. Joseph´s cadastre, Stabile cadastre, and their mapping technologies. Connections with the project of 2nd military mapping (Francis´)

5. Former land cadastre and its single updating
6. Geodetic and cartographic foundations of new maps of Land cadastre according to the Act No 177/1927 Coll., and Instruction ?A?
7. Cadastral survey for maintenance of Land cadastre (Instruction ?B?)
8. Project of State Map of the Czechoslovak Republic and its development
9. Uniform Registration of Land, Registration of Real Estates and their mapping technologies
10. Technical-Economical Mapping and accuracy evaluation of its results
11. Basic Large Scale Map and thematic large scale maps
12. Cadastre of Real Estates and its map documentation
13. Maintenance and upkeeping of digital cadastral maps and its methodology

Fields of study

Guarantors and lecturers

- **Guarantors:** Doc. Ing. Václav Čada, CSc. (100%)
- **Lecturer:** Doc. Ing. Václav Čada, CSc. (100%)
- **Tutorial lecturer:** Doc. Ing. Václav Čada, CSc. (100%)

Literature

- **Extending:** *Instruktion zur Ausführung der in Folge der Allerhöchsten Patente vom 23. December 1817. angeordneten Landes-Vermessung*. Wien, 1824.
- **Recommended:** Peter van Oosterom ed. *CADASTRE 2014 and Beyond : Commission 3 and Commission 7, FIG Policy Statement*. FIG, 2018.
- **Recommended:** Geodetické základy státních mapových děl 1. poloviny 19. století a lokalizace do S-JTSK (Čada, Václav) - http://home.zcu.cz/~cada/www-kma/download/Geodeticke_zaklady.pdf >
- **Recommended:** Kartografické vyjadřovací prostředky a interpretace obsahu map druhého vojenského mapování (Vichrová, Martina - Čada Václav) - http://home.zcu.cz/~cada/www-kma/download/Interpretace.pdf >
- **Recommended:** Koncepce vedení a údržby digitálního souboru geodetických informací (Čada, Václav) - http://home.zcu.cz/~cada/www-kma/download/MGID_Brno_2004.pdf >
- **Recommended:** Huml M., Michal J. *Mapování 10*. Vydavatelství ČVUT, Praha, 2000.
- **Recommended:** Metoda tvorby DKM v lokalitách sáhového měřítka (Čada, Václav) - http://home.zcu.cz/~cada/www-kma/download/dkm.pdf >
- **Recommended:** Návod postupu transformace lokalit KM-D do S-JTSK. Ověření na lokalitě Mladíkov (okr. Prachatice) (Čada, Václav)
- **Recommended:** Peter van Oosterom, Christiaan Lemmen, Tryggvi Ingvarsson, Paul van der Molen, Hendrik Ploeger, Wilko Quak, Jantien Stoter, Jaap Zevenbergen. *The core cadastral domain model*. Pergamon, 2006.
- **Recommended:** *The FIG Statement on the Cadastre : FIG Policy Statement*. FIG, 1995.
- **Recommended:** Vedení a údržba D-SGI v lokalitách sáhových map (Čada, Václav - Mazín, Václav) - http://home.zcu.cz/~cada/www-kma/download/Vedeni_D-SGI.pdf >

Time requirements

All forms of study

Activities	Time requirements for activity [h]
Preparation for formative assessments (2-20)	10
Preparation for an examination (30-60)	40
Practical training (number of hours)	52
Undergraduate study programme term essay (20-40)	20
Preparation for laboratory testing; outcome analysis (1-8)	8
Presentation preparation (report) (1-10)	5

Total:	135

assessment methods

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

Combined exam

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

Individual presentation at a seminar

Seminar work

Skills demonstration during practicum

teaching methods

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

Lecture with visual aids

Multimedia supported teaching

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

Individual study

Practicum

Students' portfolio

learning outcomes

Knowledge - knowledge resulting from the course:

popsat historii mapování ve velkých měřítkách

popsat postupy a pravidla katastrálního a technicko-hospodářského mapování a tematického mapování

popsat využití velkoměřítkových map pro tvorbu topografických map

Skills - skills resulting from the course:

vytvořit (tematickou) mapu velkého měřítka včetně veškerých náležitostí

vytvořit geometrický plán včetně veškerých náležitostí

Course is included in study programmes:

Study Programme	Type of	Form of	Branch	Stage	St. plan v.	Year	Block	Status	R.year	R.
Geomatics	Bachelor	Full-time	Geomatika	1	2022 akr	2023	Povinné předměty	A	3	ZS
Geomatics	Bachelor	Full-time	Geomatika	1	2023	2023	Povinné předměty	A	3	ZS
Geomatics	Bachelor	Full-time	Geomatics	1	2018	2023	Oborové předměty povinné	A	3	ZS
Land-Use Planning	Postgraduate Master	Full-time	Informační modelování staveb	1	2018 akr	2023	Povinně volitelné předměty	B	1	ZS