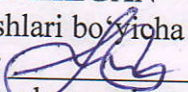


O‘ZBEKISTON RESPUBLIKASI
OLIY TA’LIM, FAN VA INNOVATSIYALAR VAZIRLIGI
SAMARQAND DAVLAT ARXITEKTURA – QURILISH UNIVERSITETI

“KELISHILGAN”
o‘quv ishlari bo‘yicha
prorektor 
M.T. Shodmonqulov
Ro‘yxatga olindi:
№ 181/a
«30» avgust 2024 yil



TIZIMLI TAHLIL1
(Structural Analysis 1)

FAN DASTURI

Bilim sohasi:	100 000 – Ta’lim
Ta’lim sohasi:	110 000 - Ta’lim
Ta’lim yo‘nalishi:	60112400 - Professional ta'lim: Qurilish muhandisligi (faoliyat turlari bo'yicha)

Samarqand – 2024

Kurs ma'lumotlari

Course Information Form

Modul kodi Code KRM 2100	O'quv yili 2024-2025	Semestr 4	ECTS – Kreditlar 4-semestr -5			
Modul turi Majburiy	Ta'lim tili O'zbek/rus		Auditoriya soatlari			Mustaqil ta'lim (soat/hafta) Independent Education (hour/week)
Fan nomi Title	Jami yuklama	Ma'ruza (soat/hafta) Lecture (hour/week)	Amaliy (soat/hafta) Practical (hour/week)	Laboratoriya (soat/hafta) Laboratory (hour/week)		
Structural Analysis 1 Tizimli tahlil	4-semestr -150	4-semestr -2	4-semestr -2		4-semestr -6	

Dastlabki shart Prerequisite	Materiallarning mustahkamligi I KMR2070 Strength of Materials I /
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Semestr Semestr	Bahor Spring
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Kurs tili Course language	O'zbek, Ingliz, Rus Uzbek, English, Russian
O'quv kursi Level of Course	Ikkinchi kurs Second Cycle
Ta'lim yo'nalishlari Course type	60112400 - Professional ta'lim: Qurilish muhandisligi (faoliyat turlari bo'yicha)
Kurs toifasi Course Category	Asosiy Core Courses
Dars shakli Mode of Delivery	An'anaviy (Yuzma – yuz muloqot) Face – to - face

Ma'sul kafedra Owner academic unit	Qurilish muhandisligi Civil engineering
Kursga ma'sul Cours Coordinator	Ubaydulloyev Olimxon Musoxonovich
O'qituvchilar Instructor(s)	Saidov Xayrullo, Ubaydulloyev Olimxon, Ismatova Dilfuza
Yordamchilar Asistant(s)	

Fanni o'qitishdan maqsad Course objectives	Statik aniq sistemalarda doimiy yuklar ta'siriga va ta'sir chiziqlari orqali ichki zo'riqishlarni tahlil qilish. Analysis of internal forces in statically determined systems under dead loads and influence lines.
Fanning mazmuni Course content	Kirish, konstruktiv sistemalar tasnifi, yuklar, gipotezalar va hisobiy sxemalar, kuch sistemalari, kuchlar, reaksiyalar, ichki kuchlar, muvozanat tenglamalari, doimiy yuk ostida tekis sistemalarini tahlil qilish, tekis sistemalarning kinematik tahlili; statik sistemalar, balkalar, arkalarni hisoblash, harakatdagi yuk ostida tekis sistemalar tahlil qilish, statik aniqlash uchun ta'sir chiziqlari tizimlari. Introduction, classification of structural systems, loads, assumptions and idealizations, force systems, forces, reactions, internal forces, equilibrium equations, analysis of plane systems under dead loads, statically determinate plane systems; beams, indirect systems, plane trusses, analysis of plane systems under live loads, influence lines for statically determinate systems.

Tavsiya qilingan yoki talab qilinadigan adabiyotlar ro'yxati Recommended Or Required Reading	<ol style="list-style-type: none"> 1. Тўраев Х.Ш., Исматов М.Х., Йўлдошев Ф.Х., Жавлиев Б.К. Курилиш механикаси. - Тошкент, Молия, 2002. -459 б. 2. Hibbeler R.C. Structural Analysis/ Prentice Hall, 8th edition, 719 pages, 2012. 3. Saidiy S.A. Qurilish mexanikasi. Darslik. -T.: "Fan va texnologiya", 2019, 272 b. 4. Ступишин Д.Ю. Строительная механика плоских стержневых систем: Учебное пособие / Д.Ю. Ступишин, С.И. Трушин. - [б. м.]: ИНФРА-М, 2019; ИНФРА-М, 2016. - 278 с.
Tavsiya etilgan qo'shimcha dastur komponentlari Recommended Optional Program Components	Yo'q\ (bor bolsa yoziladi) None

Kursni o'rganish natijalari

Course learning outcomes

1	Konstruktiv sistemalarning tasniflanishi va hisob sistemalari haqida ma'lumot. Information about the classification and idealizations of structural systems.
2	Yuklar, tayanch reaksiyalari, ichki kuchlar haqida ma'lumot. Information about Loads, support reactions, internal forces.
3	Muvozanat tenglamalari haqida ma'lumot, muvozanat tenglamalarini tuzish. Information about equations of equilibrium.
4	Muvozanat tenglamalari yordamida ichki kuchlarni (zo'riqishlarni) aniqlash. Analysis of the internal forces (stress resultants) using equations of equilibrium.
5	Harakatdagi yuklar ta'siriga statik aniq sistemalarni hisoblash. Analysis of statically determinate structures due to moving loads.

Haftalik mavzular va tegishli tayyorgarlik ishlari

Weekly Subjects and Related Preparation Studies

Hafta Week	Mavzular Themes	Resurslar Related preparation
1.	Kirish, konstruktiv sistemalar, yuklar, asosiy gipotezalar va hisob sxemalar, konstruktiv sistemalarning tasniflanishi. Introduction, structural systems, loads, fundamental assumptions and idealizations, classification of structural systems.	[1] I b.; [2] ch1;
2.	Kuchlar, kichlar sistemasi, statik muvozanat tenglamalari, 2D tizimlar uchun noaniqlik darajasi. Forces, force systems, reactions, equations of static equilibrium, internal forces, degree of indeterminacy for 2D systems.	[1] I b.; [2] ch2;
3.	Doimiy yuklar uchun 2D (tekis) konstruktiv sistemalarni tahlil qilish, yuklar va ichki kuchlar orasidagi tenglamalar, ichki kuchlarni aniqlash va ularni epyuralarini qurish. Analysis of 2D structural systems for dead loads, equations between loads and internal forces, determining of internal forces and force diagrams.	[1] 2 b.; [2] ch.4;
4.	Statik aniq yassi sistemalar, to'sinlar. Statically determinate plane systems, beams	[1] 3 b.; [2] ch.4;
5.	Statik aniq murakkab to'sinlar, sinchli sistemalar. Statically determinate compound beams, frames systems.	[1] 3 b. [2] ch.4;
6.	Statik aniq karkasli sistemalar. Statically determinate frame systems.	[1] 3 b. [2] ch.4;
7.	Harakatdagi yuklar ostida statik aniq sistemalarni tahlil qilish, ta'sir chiziqlarini chizish, ta'sir chiziqlarining mazmuni va qo'llanilishi sohasi. Analysis of statically determinate structures due to moving loads, introduction to influence lines, concepts and applications of influence lines.	[1] 4 b.; [2] ch.6
8.	Oraliq nazorat 1.	
9.	To'sinlar (balkalar) uchun ta'sir chiziqlar. Influence lines for beams.	[1] 4 b. ; [2] ch.6
10.	Murakkab to'sinlar (ko'p oraliqli static aniq balkalar) uchun ta'sir chiziqlar. Influence lines for compound beams.	[1] 4 b.; [2] ch.6;

11.	Ramalar uchun ta'sir chiziqlari. Influence lines for frames.	[1] 4 b.
12.	Arkalar va bilvosta yuklangan balkalar uchun ta'sir chiziqlari. Influence lines for arches and indirect loaded beams.	[1] 4 b.; ; [2] ch.6;
13.	Oraliq nazorat 2	
14.	Fermalar uchun ta'sir chiziqlari. Influence lines for trusses.	[1] 5 b. ; [2] ch.6;
15.	Final / Yakuniy	

Baholash jarayoni

Evaluation System

Mashg'ulot turi Activities	Soni Number	Baholash Percentage of Grade
Darsga qatnashish Attendance / participation		
Laboratoriya ishi Laboratory		
Amaliy ish (qo'shimcha vazifa) Application		
Kurs ishi Field work		
Maxsus kurs amalyoti (ish joyida) Special course internship (work placement)		
Testlar Quizzes / studio crtics		
Uyga vazifani baholash Homework assignments	2	20
Ijodiy ish (taqdimot) Presentations / jury		
Loyiha ishi Project		
Seminar Seminar / workshop		
Oraliq nazorat Mid -Terms	2	30
Yakuniy nazorat Final	1	50
O'zlashtirish ko'rsatgichi Percentage of in – term studies		50
Yakuniy imtihon bahosi Percentage of final examination		50
Jami Total		100

ECTS taqsimoti

ECTS workload table

Topshiriqlar Activities	Soni Number	Davomiyligi (soat) Duration (hour)	Umumiy yuklama Total workload
Mashg'ulot soati Course hours	15	4	60
Laboratoriya ishi Laboratory			
Amaliy ish (qo'shimcha vazifa) application			
Kurs ishi Field work			
Mustaqil ta'lim Study hours out of class	13	6	78
Maxsus kurs amalyoti (ish joyida) Special course internship (work placement)			
Uyga vazifani baholash Homework assignments			
Testlar / Viktorina Quizzes / studio critics			
Loyiha ishi Project			
Ijodiy ish (taqdimot) Presentations / seminar			
Oraliq nazorat Mid – terms (Examination +Examination prep. Duration)	2	4	8
Yakuniy nazorat (nazorat va nazoratga tayyorlanish soati) Final (examination +examination prep. Duration)	1	4	4
Jami yuklama Total workload			150/30
Jami yuklama / 30 (soat) Total workload / 30(h)			5
Kredit ECTS credit			5

Qo'shimcha eslatmalar Extra Notes	Yo'q\ (bor bolsa yoziladi) None
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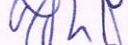
Fan dasturi Mirzo Ulug'bek nomidagi Samarqand davlat Arxitektura-qurilish universitet kengashining 2024 yil 30 -avgustdagi 1 -sonli bayonnomasi bilan ma'qullangan.


Kafedra mudiri:

 Karimov G'

Tuzuvchilar

 Saidov X.

 Ubaydulloyev O.

 Ismatova D.