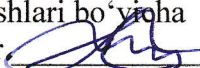


**O‘ZBEKISTON RESPUBLIKASI**  
**OLIV TA‘LIM, FAN VA INNOVATSIYALAR VAZIRLIGI**  
**SAMARQAND DAVLAT ARXITEKTURA – QURILISH UNIVERSITETI**

**“KELISHILGAN”**  
o‘quv ishlari bo‘yicha  
prorektor   
M.T. Shodmonqulov  
Ro‘yxatga olindi: № 33/7  
«30» avgust 2024 yil

  
**“TASDIQLAYMAN”**  
Rektor   
Ch.I. Turkyilmaz  
«30» avgust 2024 yil

**OLIV SUYUQLIK MEXANIKASI**  
**FAN DASTURI**

**Bilim sohasi:** 700 000 - Muhandislik, ishlov berish va qurilish sohalari  
**Ta‘lim sohasi:** 730 000 - Arxitektura va qurilish  
**Ta‘lim yo‘nalishi:** 70730401 - Muhandislik kommunikatsiya tizimlari,  
qurilishi va montaji

**Samarqand – 2024**

**Kurs ma'lumotlari**  
Course Information Form

<b>Modul kodi</b> Code MAS5200	<b>O'quv yili</b> 2024-2025	<b>Semestr</b> 2	<b>ECTS – Kreditlar</b> 1-semestr -5		
<b>Modul turi</b> Majburiy	<b>Ta'lim tili</b> O'zbek		<b>Auditoriya soatlari</b>		<b>Mustaqil ta'lim</b> (soat/hafta) Independent Education (hour/week)
<b>Fan nomi</b> Title	<b>Jami yuklama</b>	<b>Ma'ruza</b> (soat/hafta) Lecture (hour/week)	<b>Amaliy</b> (soat/hafta) Practical (hour/week)	<b>Laboratoriya</b> (soat/hafta) Laboratory (hour/week)	
Oliy suyuqlik mexanikasi	1-semestr -150	1-semestr -3			1-semestr -7

<b>Dastlabki shart</b> Prerequisite	<b>Yo'q</b> None
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<b>Semestr</b> Semestr	<b>Bahorgi</b> Spring
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<b>Kurs tili</b> Course language	<b>O'zbek</b> Uzbek
<b>O'quv kursi</b> Level of Course	<b>Birinchi kurs</b> First Cycle
<b>Ta'lim yo'nalishlari</b> Course type	70730401 - Muhandislik kommunikatsiya tizimlari, qurilishi va montaji 70730401-Eengineering communication systems, construction and assembly
<b>Kurs toifasi</b> Course Category	Asosiy Core Courses
<b>Dars shakli</b> Mode of Delivery	An'anaviy (Yuzma – yuz muloqot) Face – to - face

<b>Ma'sul kafedra</b> Owner academic unit	Atrof muhit muhandisligi Environmental engineering
<b>Kursga ma'sul</b> Cours Coordinator	B.M.Norqulov
<b>O'qituvchilar</b> Instructor(s)	B.M.Norqulov
<b>Yordamchilar</b> Asistant(s)	X.B.Artikboyev

<b>Fanni o'qitishdan maqsad</b> Course objectives	<p>“Oliy suyuqlik mexanikasi” fan talablarida atrof muhitda suv va suv harakati zamirida sodir bo‘ladigan jarayonlarni anglashda zamonaviy ilmiy dunyoqarashni shakllantirish, muhandislik kommunikatsiyalari inshootlarning gidravlik hisoblarni bajarish va ularning konstruktiv, iqtisodiy va ekologik maqbul yechimlarni topishga xizmat qiladi.</p> <p>The requirements of "Hydraulics" science serve to form a modern scientific worldview in the understanding of the processes that occur in the environment under the influence of water and water movement, perform hydraulic calculations of engineering communications structures and find their constructive, economic and ecologically acceptable solutions.</p>
<b>Fanning mazmuni</b> Course content	<p>Fanni o'qitishdan maqsad-talabalarga qurilish muhandisligida gidravlikani harakatdagi qonuniyatlarini va jarayonlari, hamda quvurlardagi qarshiliklar va suv ta'minoti tizimlari gidravlik hisobi va murakkab tizimlarini hisoblashni o'rtatish, amaliyotda tatbiq etish ko'nikmasini hosil bo'lishdan iborat</p> <p>The goal of teaching science is to teach students the laws and processes of</p>

	hydraulics in civil engineering, as well as the calculation of resistances in pipes and hydraulic systems of water supply systems, and the ability to apply them in practice.
<b>Tavsiya qilingan yoki talab qilinadigan adabiyotlar ro'yxati</b> Recommended Or Required Reading	<p><b>Asosiy adabiyotlar:</b></p> <ol style="list-style-type: none"> <li>1. Bazarov D.R., Karimov R.M., Matyakubov B.Sh., Xidirov S.Q., Gidravlika -1 Toshkent-2018 yil-539 b.</li> <li>2. Bazarov D.R., Karimov R.M., Matyakubov B.Sh., Xidirov S.Q., Gidravlika -2 Toshkent-2018 yil-556 b.</li> <li>3. Umarov A.Yu. «Gidravlika». Toshkent, «Uzbekistan», 2002.- 367 b.</li> <li>4. Ubaydullaev P.X., Ubaydullaev B.P..Amaliy suyuqlik mexanikasi. Oliy o'quv yurtlar uchun o'quv qo'llanma.To'ron-Iqbol.Toshkent 2006.</li> <li>5. R.R.Chugayev., Gidravlika., Energoizdat, 1982 god-672 str.</li> <li>6. A.M.Arifjanov, Ch.Fayziev, A.U.Toshxo'jaev., Gidravlika, Yoshlar nashriyoti uyi, Toshkent-2020 yil -370 bet</li> <li>7. B.M.Norqulov, Suyuqlik va gaz mexanikasidan masalalar yechish usullari, SamDU nashriyoti 2022 yil-154 bet</li> <li>8. Norqulov B.M, Tadjieva D.O. «Suyuqlik va gaz mexanikasi» fanidan (masalalar to'plami) uslubiy qo'llanma Samarqand, 2020 y.-74 b.</li> </ol> <p><b>Qo'shimcha adabiyotlar</b></p> <ol style="list-style-type: none"> <li>9. Girgidov A.D. «Mexanika jidkosti i gaza» (Gidravlika) Sankt-Peterburg izdatelstvo SPbGPU, 2004.- 545 s.</li> <li>10. Bozorov D. R, Karimov R.K. va boshqalar «Gidravlika» Toshkent «Bilim», 2003.- 384 b.</li> <li>11. Arifjanov O.M. «Gidravlika» (masalalar to'plamasi). Toshkent., "Istiqlol", 2005.- 84b.</li> <li>12. Ya.M. Vilner, I.P. Vopnyarskiy, V.I. Kuzmenkov, I.A. Shulgin. Laboratorn`y praktikum po gidravlike, gidromashinam i gidroprivodu M. V'ssh. Shkola. 1980.</li> <li>13. V.M. Lyatxer, A.M. Prudovskiy «Gidravlicheskie modelirovanie» M., Energostroyizdat 1984 god.</li> <li>14. Maxkamov S.M. Tursunova E.A. «Gidravlik atamalar lug'ati» Toshkent. TASI, 2007.- 46 b.</li> <li>15. Suyuqlik va gaz mexanikasi fanidan laboratoriya ishlarini bajarish uchun uslubiy qo'llanma. Norqulov B.M., Xaydarov E.A. SamDAQL. Samarqand 2020.</li> </ol> <p><b>Axborot manbaalari.</b></p> <ol style="list-style-type: none"> <li>16. <a href="http://www.citycom.ru/index.php">http://www.citycom.ru/index.php</a></li> <li>17. <a href="http://www.politerm.com.ru/about.htm">http://www.politerm.com.ru/about.htm</a></li> <li>18. <a href="http://www.ntpcentr.com/ru/">http://www.ntpcentr.com/ru/</a></li> <li>19. <a href="http://toshlyandiya.narod.ru/index/0-80">http://toshlyandiya.narod.ru/index/0-80</a></li> <li>20. <a href="http://www.techgidravlika.ru/">http://www.techgidravlika.ru/</a></li> <li>21. <a href="http://megagum.ru/?cat=news&amp;news_id=18">http://megagum.ru/?cat=news&amp;news_id=18</a></li> <li>22. <a href="http://www.m-gidravlika.ru/">http://www.m-gidravlika.ru/</a></li> </ol>
<b>Tavsiya etilgan qo'shimcha dastur komponentlari</b> Recommended Optional Program Components	Yo'q\ (bor bo'lsa yoziladi)  None

## Kursni o'rganish natijalari

### Course learning outcomes

1	Ushbu kursni muvaffaqiyatli tamomlagan talabalar fan dasturi bo'yicha chuqur amaliy va nazariy bilimlarga ega bo'ladilar; Students who successfully complete this course; they will have in-depth practical and theoretical knowledge of the science program;
2	Muvozanatda va harakatdagi suyuqlik qonunlarini o'rganadilar; They study the laws of fluid in balance and movement;

3	Suyuqliklarning fizik xususiyatlari o'rganadilar; Physical properties of liquids learn;
4	Suyuqliklardagi jism va ularning o'zaro ta'siri . Body in liquids and their interaction
5	Suv ta'minoti quvurlarni gidravlik hisoblaridan foydalana olish qobiliyatiga ega bo'ladilar; Water supply will be able to use hydraulic accounts of pipes;
6	Irrigatsiya tizimlarida sug'orishdan oqilona foydalana oladilar; Can use irrigation wisely in irrigation systems;
7	O'z fikr-mulohaza va xulosalarini asosli tarzda aniq bayon eta olish malakalariga ega bo'ladilar. They will have the skills to express their opinions and conclusions clearly.

## Haftalik mavzular va tegishli tayyorgarlik ishlari

Weekly Subjects and Related Preparation Studies

Hafta Week	Mavzular Themes	Resurslar Related preparation
1.	Quvurlarning gidravlik hisoblash	1,2,3-darslik (I bob)
2.	Kalta quvurlarni gidravlik hisoblash	1,2,3-darslik (I bob)
3.	Gidravlik zarba hodisasi	1,2,3-darslik (I bob)
4.	Suyuqlikning yupqa devorli teshikdan va naychadan doimiy napor ta'sirida otilib chiqishi	1,2,3-darslik (I bob)
5.	Suyuqlikning bir idishdan ikkinchi idishga oqib chiqishi	1,2,3-darslik (I bob)
6.	Murakkab quvurlarni gidravlik hisoblash	1,2,3-darslik (I bob)
7.	Nukuradze grafigi. Nikuradze grafigining zonalari	1,2,3-darslik (I bob)
8.	Ochiq o'zarlarda suyuqlik oqimining ko'ndalang kesimi maydonning gidravlik elementlari	1,2,3-darslik (I bob)
9.	Gidravlik eng qulay ko'ndalang kesimi. Eng katta va eng kichik ruxsat etilgan o'rtacha tezlik	2-darslik (I bob)
10.	Suyuqlik oqimining tekis harakatini gidravlik hisoblashda asosiy masalala	2-darslik (I bob)
11.	O'zan va kanallarda suyuqlik oqimining barqaror notekis harakati	2-darslik (II bob)
12.	Kanal kesmasini solishtirma energiyasi va kritik chuqurligi	2-darslik (II bob)
13.	Yupqa devorli va keng ostionali suv o'tkazgichlar	2-darslik (III bob)
14.	Gidravlik sakrash	2-darslik (IV bob)
15.	To'g'on orqali beflarni tutashtirish. Tutash jarayonlar	2-darslik (IV bob)

## Baholash jarayoni

Evaluation System

Mashg'ulot turi Activities	Soni Number	Baholash Percentage of Grade
<b>Darsga qatnashish</b> Attendance / participation	45	15
<b>Laboratoriya ishi</b> Laboratory		
<b>Amaliy ish (qo'shimcha vazifa)</b> Application		
<b>Kurs ishi</b> Field work		
<b>Maxsus kurs amalyoti (ish joyida)</b> Special course internship (work placement)		
<b>Testlar</b> Quizzes / studio crtics		
<b>Uyga vazifani baholash</b> Homework assignments	5	10
<b>Ijodiy ish (taqdimot)</b> Presentations / jury	5	5
<b>Loyiha ishi</b> Project		

<b>Seminar</b> Seminar / workshop		
<b>Oraliq nazorat</b> Mid -Terms	2	20
<b>Yakuniy nazorat</b> Final	1	50
<b>O'zlashtirish ko'rsatgichi</b> Percentage of in – term studies		50
<b>Yakuniy imtihon bahosi</b> Percentage of final examination		50
<b>Jami</b> Total		100

<b>ECTS taqsimoti</b> ECTS workload table			
<b>Topshiriqlar</b> Activities	<b>Soni</b> Number	<b>Davomiyligi (soat)</b> Duration (hour)	<b>Umumiy yuklama</b> Total workload
<b>Mashg'ulot soati</b> Course hours	15	3	45
<b>Laboratoriya ishi</b> Laboratory			
<b>Amaliy ish (qo'shimcha vazifa)</b> application			
<b>Kurs ishi</b> Field work			
<b>Mustaqil ta'lim (maslahat)</b> Study hours out of class	15	7	105
<b>Maxsus kurs amalyoti (ish joyida)</b> Special course internship (work placement)			
<b>Uyga vazifani baholash</b> Homework assignments			
<b>Testlar / Viktorina</b> Quizzes / studio critics			
<b>Loyiha ishi</b> Project			
<b>Ijodiy ish (taqdimot)</b> Presentations / seminar			
<b>Oraliq nazorat</b> Mid – terms (Examination +Examination prep. Duration)			
<b>Yakuniy nazorat (nazorat va nazoratga tayyorlanish soati)</b> Final (examination +examination prep.Duration)			
		<b>Jami yuklama</b> Total workload	150
		<b>Jami yuklama / 30 (soat)</b> Total workload / 30(h)	150/30=5
		<b>Kredit</b> ECTS credit	5

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

**Kafedra mudiri:**  Norqulov B.M.

**Tuzuvchi:**  Artikboyev X.B.