

**O'ZBEKISTON RESPUBLIKASI**

**OLIY VA O'RTA MAXSUS TA'LIM VAZIRLIGI**

**QARSHI MUHANDISLIK - IQTISODIYOT INSTITUTI**



Ro'yatga olindi:

№ HD - 60720700-1.03

2022 yil "30" 08

**YO'NALISHGA KIRISH**

**FANINING O'QUV DASTURI**

**Bilimi**

sohalari:

Ta'lim

sohalari:

Ta'lim

yo'nalishi:

700 000 - Muhandislik, ishlov berish va qurilish sohalari

720 000 - Ishlab chiqarish va ishlov berish sohalari

60720700 - Texnologik mashinalar va jihozlar (Neft-qaz sanoati mashinalari va jihozlari)

Qarshi - 2022

| Fan/modul kodi        | O'quv yili                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Semestr(lar)            | ECTS - Kreditlar    |
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| YK1104                | 2022-2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1                       | 4                   |
| Fan/modul turi        | Ta'lim tili                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Haftadagi dars soatlari |                     |
| Majburiy              | O'zbek/rus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4                       |                     |
| Fanning nomi          | Auditoriya mashg'ulotlari (soat)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Mustaqil ta'lim (soat)  | Jami yuklama (soat) |
| 1. YO'NALISHGA KIRISH | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 60                      | 120                 |
| 2. Fanning mazmuni    | <p><b>2.1. Fanni o'qitish maqsadi va vazifalari</b></p> <p>Fanni o'qitishdan maqsad - neft va gazning xalq xo'jaligida tutgan o'ri, hosil bo'lishi va fizik-kimyoviy tavsiflari, yotishi sharoitlari, uglevodorodli konlarning turlari, neft-gaz konlarini izlash va razvedkasi, neft-gaz quduqlarini burg'lash, neft-gaz konlari hamda neft-gazni qayta ishlashda qo'llaniladigan texnologiyalar va ularni amalga oshirish uchun asosiy mashinalar va jihozlarning vazifalari, tuzilishi, ishlash prinsipi, konstruksiyalari va asosiy texnik ko'rsatkichlari to'g'risida talabalarga boshlang'ich ma'lumotlar berish orqali ularning bilimlarini shakllantirish.</p> <p>Fanning vazifasi - talabalarining neft-gazning paydo bo'lishi, tarkibi, asosiy xossalari; neft-gazni qidirish va razvedka qilish, quduqlarni burg'lash va neft-gazni qazib olish hamda qayta ishlash usullari va asosiy jihozlarni o'rganishlari natijasida ularning keyingi ta'lim olish jarayonida boshqa fanlarni o'zlashtirishlari uchun ko'nikmalar hosil qilish.</p> <p><b>2.2. Asosiy nazariy qism (ma'ruza mashg'ulotlari)</b></p> <p><b>Fan tarkibi mavzulari:</b></p> <p><b>1- Modul. Neft va gaz geologiyasi to'g'risida tushunchalar</b></p> <p><b>1 – Mavzu. Kirish. O'zbekistonda neft va gaz sanoatining rivojlanishi tarixi</b></p> <p>O'zbekistonda neft qazib olish va qayta ishlashning rivojlanishi. O'zbekistonda gaz qazib olish va qayta ishlash sanoatining rivojlanishi. Gazkimyxo sanoatining paydo bo'lishi. Geologiya, burg'lash, qazib chiqarish va qayta ishlash sohalarida neft va gaz korxonalarining faoliyati.</p> <p><b>2 – Mavzu. Neft va gazning yer qatida joylashuvi, tarkibi va xossalari</b></p> <p>Yerning tuzilishi, tashqi qatliq qobiqlari va tashqi litosfera qismlari shakllari, o'ichamlari va strukturalari to'g'risida umumiy ma'lumotlar. Yer qatida neft va gazning joylashuvi. Geologik jarayonlar va ularning</p> |                         |                     |

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| 6. <a href="http://www.ngv.ru">http://www.ngv.ru</a> Neft va gaz elektron ma'lumotlari sayti.                                                                                                                                         |  |
| Fan nazariyasi Qarshi muhandislik-iqtisodiyot instituti Kengashining 2022 yil "30" 08 dagi 1 -sonli bayonnomasi bilan ma'qullangan.                                                                                                   |  |
| O'zbekiston Respublikasi Oliy va o'rta maxsus ta'lim vazirligining 2022 yil "16" 04 dagi 341 -sonli buyrug'i bilan ma'qullangan fan dasturlarini tegishli tayanch oliy ta'lim muassasasi tomonidan tasdiqlashga rozilik berilgan.     |  |
| <b>Fan/modul uchun mas'ullar:</b><br>Eshkabilov X.K. – QarMII "Texnologik mashinalar va jihozlar" kafedrasida dotsenti, t.f.n., dotsent;<br>Sumadov A.X. - QarMII "Texnologik mashinalar va jihozlar" kafedrasida assistenti.         |  |
| <b>Taqrizchilar:</b><br>L.X.Sattorov -QarMII, NGF, "Neft va gaz ishi" kafedrasida mudiri, PhD;<br>F.P.Qurbonov - Shurtan neft va gaz qazib chiqarish boshqarmasi<br>"Gaz va gazkondensat qazib chiqarish" bo'limi yetakchi muhandisi. |  |



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| 6. | <p><b>Adabiyotlar</b></p> <p><b>6.1. Asosiy adabiyotlar</b></p> <ol style="list-style-type: none"> <li>1. Akramov B.Sh., To'rayev B.M. Neft va gaz konlari mashina va mexanizmlari, O'quv qo'llanma. -T.: 2008. -462 b.</li> <li>3. Murodov O.E., Yuldashev T.R., Eshkabilov X.K. Neft va gaz ishi asoslari. O'quv qo'llanma. -Qarshi, "Nasaf", 2012.</li> <li>4. Yuldashev T.R., Eshkabilov X.Q. Neft va gaz konlari mashina va mexanizmlari. O'quv qo'llanma. Qarshi, Qashqadaryo ko'zgusi OAV nashriyoti, 2015. -327 b.</li> <li>5. Yuldashev T.R., Eshkabilov X.Q., Nurmatov J.T., Xolbazarov I.R. Neft va gaz konlari asoslari. Darslik. -T.: Voris, 2021. -458 b.</li> <li>6. Кортуал А.А., Шамахов А.М., Основы нефтегазового дела. Учебник. -Уфа, ООО «Детали Полиграф Сервис», 2005. -524 с.</li> </ol> <p><b>6.2. Qo'shimcha adabiyotlar</b></p> <ol style="list-style-type: none"> <li>1. Mirziyoyev Sh.M. Buyuk kelajagimizni mard va olijanob xalqimiz bilan birga quramiz. - T.: "O'zbekiston" NMU, 2017. -488 b.</li> <li>2. Баграмов Р.А. Буrownе машины и комплексы. Учебник для ВУЗов. -М.: Недра, 1988. - 501 с. с ил.</li> <li>3. Akramov B.Sh., Umedov Sh. X. Neft va gaz qazib olish bo'yicha ma'lumotlarni. -T.: Fan va texnologiya, 2010. -368 b.</li> <li>4. Akramov B.Sh., Sidiqov J. Neft va gaz qazib olishni ishlatish. Darslik. -T.: TDUTU, 2002.</li> <li>5. Ивановский В.Н. Нефтегазовое оборудование. Учебник для ВУЗов. -М.: Центр/ИнтНефтьгаз, 2006. -720 с.</li> <li>6. Покрепин Б.В. Разработка нефтяных и газовых месторождений. Учебное пособие. -М.: Недра, 2009. -156 с.</li> <li>7. Salimov Z. Neft va gazni qayta ishlash jarayonlari va uskunlari. - T.: Aboqachi, 2010. -508 b.</li> <li>8. Краткая энциклопедия нефтегазовой геологии. -М., Изд. Академии Горных наук, 1998.</li> </ol> <p><b>6.3. Axborot manbalari</b></p> <ol style="list-style-type: none"> <li>1. <a href="http://www.lex.uz">http://www.lex.uz</a>. O'zbekiston Respublikasi qonun hujjatlari ma'lumotlari milliy bazasi sayti.</li> <li>2. <a href="http://www.gov.uz">http://www.gov.uz</a>. O'zbekiston Respublikasining hukumat portali.</li> <li>3. <a href="http://www.geologiya.ru">http://www.geologiya.ru</a></li> <li>4. <a href="http://www.dobi.org/lib.ru">http://www.dobi.org/lib.ru</a>. Neft va gaz elektron kutubxonasi.</li> <li>5. <a href="http://znanet.uz">http://znanet.uz</a>. Axborot ta'lim tarmog'i.</li> </ol> |
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| energiyalarining asosiy manbalari. | <p><b>3 – Mavzu. Neft va gazning tarkibi va xossalari</b></p> <p>Neftning tarkibi. Neftning fizikaviy va kimyoviy xossalari. Gazning tarkibi. Gazning fizikaviy va kimyoviy xossalari. Gaz kondensati. Gazning fazaviy o'zgarishlari. Xom-ashyo va tovar neft. Tovar neft tarkibiga qo'yilgan talablar. Xom-ashyo va tovar gazlar. Tovar gazlar tarkibiga qo'yilgan talablar. Gaz gidratlari.</p> <p><b>4 – Mavzu. Neft va gaz konlarini izlash va razvedkasi</b></p> <p>Mineral va tog' jinslari haqida umumiy tasavvurlar. Tog' jinslarining paydo bo'lishi. Geologik jinslar va ularning tasvirlanishi. Geologik xaritalar va qirg'irlar. Neft va gaz konlari hosil bo'lishi. Migratsiya. Tabiiy rezervuarlar. Tutqichlar, uyumlarining hosil bo'lishi.</p> <p><b>5 – Mavzu. O'zbekistonning asosiy neftgazli hududlari, neft va gaz konlari</b></p> <p>O'zbekistonning asosiy neftgazli hududlari. Resurslar, zahiralalar va ularning tasnifi. Qidiruv-razvedka ishlari metodlari to'g'risida umumiy ma'lumotlar. Neft, gaz va gazkondensatli konlar. Neft va gaz konlarini ishlatishning o'ziga xos xususiyatlari.</p> <p><b>2 – Modul. Neft va gaz quduqlarini burg'ilash texnologiyalari va jihozlari</b></p> <p><b>6 – Mavzu. Neft va gaz quduqlarini burg'ilash to'g'risida umumiy tushunchalar va burg'ilash qurilmalari tasnifi</b></p> <p>Neft va gaz quduqlarini burg'ilash tarixi. Quduqlarni burg'ilash jarayoni va texnologiyasi. Quduqlarning turlari. Quduqlarning konstruksiyasi. Obsad kolonnalari vazifasi. Burg'ilash qurilmalari tasnifi. Burg'ilash eritmaları.</p> <p><b>7 – Mavzu. Burg'ilash qurilmalari asosiy mashinalari va mexanizmlari</b></p> <p>Burg'ilash qurilmalarining tasnifi va asosiy parametrlari. Burg'ilash minoralari, rotor, ko'tarish mexanizmlari, tal arqonlari, kronblyoklar, kryuklar, kryukblyoklar, arqonni mahkamlash uchun qurilmalar. Burg'ilash leboyodkalari, burg'ilash nasoslari, verityuglar, sirkulyatsion tizim, otqinga qarshi jamlama.</p> <p><b>8 – Mavzu. Tik, qiya, gorizontal va to'p quduqlarni burg'ilash</b></p> <p>Tik, qiya, gorizontal va to'p quduqlarni burg'ilashning o'ziga xos xususiyatlari. Burg'ini uzatish uchun qurilma, ko'tarib-tushirish operatsiyasi mexanizmlari tarkibi, joylashuvi va tuzilishi sxemalari. Burg'ilash oraliqlari to'g'risida tushunchalar. Burg'ilash eritmaları va ularning vazifalari.</p> |
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| <p><b>3 – Modul. Neft-gaz qazib olish va qayta ishlash uchun mashinalar va jihozlar</b></p> | <p><b>9 - Ma'ruza. Neft va gaz qazib olish jihozlari tasnifi</b></p> <p>Neft va gaz qazib olish uchun jihozlar va ularning tasnifi. Qatlam bosimiga qarshi tizimlar jihozlari. Neftni yig'ish va tayyorlash uchun jihozlar. Neftni kon sharoitida tayyorlash tizimlari. Separatorlar. Rezervuarlar. Gaz, gazkondensatini yig'ish va tayyorlash uchun jihozlar. Gaz separatorlar.</p> <p><b>10 - Ma'ruza. Neft va gaz quduqlarini ishlatish uchun jihozlar</b></p> <p>Favvora quduqlarida qo'llaniladigan jihozlar sxemasi va tarkibi. Favvora armatursi va manifold. Favvora armatursi zulfli va roshlovchi quvimlari. Nasos – kompressor quvurlari. Quduq zichlamalari (paklarlar), ularning vazifasi va tasnifi.</p> <p><b>11 - Ma'ruza. Neft quduqlarini mexanizatsiyalashgan usulda ishlatish</b></p> <p>Quduqlarni shtangali va shlangasiz nasoslari yordamida ishlatish jihozlari. Shtangali chuqurlik nasoslari ishlatish prinsipi, tuzilishi, parametrlari. Quduqlarni gazlift usulida ishlatish uchun jihozlar.</p> <p><b>12 - Ma'ruza. Neftni qayta ishlash jarayonlari va jihozlari</b></p> <p>Neftni qayta ishlash jarayonlari va qo'llaniladigan jihozlar. Neftni suvsizlantirish va tuzsizlantirish. Fraksiyalarga ajratish. Neftni birlamchi haydash. Neft va uning mahsulotlari. Neftni qayta ishlashda qo'llaniladigan jihozlar. Issiqlik almashinuv apparatlari. Pechlar. Kolonnali apparatlar.</p> <p><b>13 - Ma'ruza. Gazni qayta ishlash jarayonlari va jihozlari</b></p> <p>Gazni tayyorlash, qayta ishlash va chuqur qayta ishlash jarayonlari va qo'llaniladigan texnologik jihozlar. Texnologik jarayonlarni amalga oshirishda asosiy va yordamchi jihozlarning qo'llanilishi.</p> <p><b>14 – Nasos va kompressor stansiyalari</b></p> <p>Nasos va ularning turlari. Gaz kompressorlari. Kompressor stansiyalari va ularning jihozlari. Nasos va kompressorlardan foydalanishning o'ziga xos xususiyatlari.</p> <p><b>15 – Mavzu. Tabiiy gazni tashish va qayta ishlash jarayonlari jihozlari</b></p> <p>Tabiiy gazdan foydalanish. Tabiiy gazni tashish uchun quvurlar va ularning materiallari. Armatura (zulfli, ventill, klapan) jihozlari. Tabiiy gazni vodorod sulfididan tozalash. Vodorod sulfididan oltingugurt olish, polimerlar va suyuqliklar olish jarayonlari.</p> |
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| <p>zaruri sharoitlarni ta'minlovchi, o'quv jarayonida ta'lim oluvchining faolligini rivojlantiruvchi. Shaxsga yo'naltirilgan ta'lim texnologiyalari o'qituvchi va talabning o'zaro individual tezkor-so'rov muloqotida, uyga berilgan individual topshiriqlarni bajarishlarida, murakkab va munozarali masalalarni yechishlarda, haftalik maslahatlar davomida amalga oshiriladi.</p> <p>O'quv jarayonini tashkil etishda faol va interfaol ta'lim metodlari: dialog, subbat, guruhlar va kichik guruhlarida ishlash kabilardan foydalaniladi.</p> <p>Ma'ruzalarni o'qishda multimedia texnologiyalarini qo'llash va elektron modulli majmualardan foydalanish nazarda tutiladi.</p> <p>Talabalarning auditordiyadan tashqari mustaqil ishlashlari institut axborot-resurs markazlari, o'quv zallari, Internet tarmog'i resurslari va institut lokal tarmoqlari resurslaridan foydalanilgan holda amalga oshiriladi.</p> <p>Fan bo'yicha amaliy mashg'ulotlarni o'qishda texnologik quvimlarning mavjud maketlaridan, texnologik quvimlar, apparat va jihozlarning namunalaridan va boshqa turdagi yig'ma birliklar tuzilishi, ishlab chiqarish prinsiplari o'rganish bilan bir qatorda ularning mustahkamlik ko'rsatkichlarini aniqlash va ishlash samaradorliklarini o'rganish bo'yicha misol va masalalar yechiladi.</p> <p>Auditoriya mashg'ulotlari ma'ruza shaklida PK va videoprojektortlardan foydalanilgan holda, amaliy mashg'ulotlar bir akademik guruhga bir professor-o'qituvchi tomonidan "Texnologik mashinalar va jihozlar" kafedrasida ma'ruza va amaliy mashg'ulotlari xonalarida, hamda institut o'quv poligonida o'rnatilgan burg'lash va neft-gaz konlari jihozlaridan, laboratoriya standlari, maketlardan, qirgimil modellardan, asl namunalaridan foydalanilib o'tiladi.</p> <p>Talabalarining mustaqil ta'limi amaliy mashg'ulotlarga tayyorgarlik, mustaqil ta'lim bo'yicha mavzularni o'zlashtirishlari kabilarni nazarda tutadi. Mustaqil ishlar nazorati hamda uning bajarilishi va rasmiylashtirishlari bo'yicha o'qituvchining yordami maslahatlar shaklida olib boriladi.</p> | <p><b>5. Kreditlarni olish uchun talablar</b></p> <p>Fan mavzulariga oid nazariy va uslubiy tushunchalarni to'la o'zlashtirish, egallagan umumiy tushunchalar bo'yicha tahlil natijalarini to'g'ri aks ettira olish, o'rganayotgan jarayonlar haqida mustaqil ravishda muhohada yuritish va joriy, oraliq nazorat shakllarida berilgan individual vazifa va topshiriqlarni bajarish, yakuniy nazorat bo'yicha test topshirish.</p> |
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|    | <ul style="list-style-type: none"> <li>- yerning tashqi qattiq qobiqlari, tashqi litosfera qismlari shakllari, o'lehamlari va strukturalari to'g'risida umumiy ma'lumotlarni;</li> <li>- resurslar, zahiralari va ularning tasniflari to'g'risida umumiy ma'lumotlarni;</li> <li>- tutqichlarning asosiy turlari, uyumlarning hosil bo'lishi tamoyillari, O'zbekistonning asosiy neftgazgeologik hududlarini;</li> <li>- quduqlarning ahamiyati va konstruksiyalari to'g'risida umumiy ma'lumotlarni;</li> <li>- asosiy kompleks jihozlarning vazifalari va tuzilishlari haqida umumiy ma'lumotlarni;</li> <li>- otqingacha qarshi komplekslar jihozlarning vazifalari, tuzilishi va tarkibi to'g'risida umumiy ma'lumotlarni;</li> <li>- mahsulotlarni quduqdan yer sirtiga ko'tarib chiqarish, ularni yig'ish va tayyorlash jarayonida qo'llaniladigan jihozlarning vazifalari, ishlash prinsiplari va tuzilishi to'g'risida umumiy ma'lumotlarni.</li> </ul> <p><b>talaba bilimga ega bo'lishi kerak:</b></p> <ul style="list-style-type: none"> <li>- neft va gaz konlarini qidirishning geologik metodlari va usullari haqida;</li> <li>- neft va gaz quduqlarini burg'lash metodlari haqida, quduqlarni burg'lashda qo'llaniladigan asosiy jihozlari to'g'risida;</li> <li>- neft qazib olishning turli mexanizatsiyalashgan usullari haqida;</li> <li>- neft va gazni qayta ishlashning turli usullari haqida;</li> <li>- neft va gazni qayta ishlashda qo'llaniladigan asosiy jihozlari haqida.</li> </ul> <p><b>talaba ko'nikmalarni egallashi kerak:</b></p> <ul style="list-style-type: none"> <li>- burg'lash ishlarini bajarish uchun zaruriy komplekslarni aniqlashni;</li> <li>- turli neft-gaz konlari jihozlari konstruksiyalari tahlilini;</li> <li>- neft va gazni qayta ishlashda zaruriy komplekslarni aniqlashni.</li> </ul> |
| 4. | <p><b>Ta'lim texnologiyalari va metodlari</b></p> <ul style="list-style-type: none"> <li>- informatsion-rivojlantiruvchi texnologiyalar, bilimlar tizimini shakllantirishga, yodda saqlash va ulardan foydalanishga yo'naltirgan. Ma'ruzalarni tashkil etish va o'qish hamda amaliy mashg'ulotlarni o'tkazish metodlari, sohaga tegishli adabiyotlar va davriy nashrlarni mustaqil o'rganish, bilimlarni mustaqil ravishda boyitish uchun zamonaviy informatsion texnologiyalarni qo'llash, shu jumladan axborotlarning texnik va elektron vositalaridan foydalanish, internet resurslariga murojaat qilish;</li> <li>- shaxsaga yo'naltirilgan ta'lim texnologiyalari, o'quv jarayoni mobaynida ta'lim oluvchilarning turli xildagi qobiliyatlarini hisobga olishni ta'minlovchi, ularning individual qobiliyatlarini rivojlantirish uchun</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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| 2.3. Amaliy mashg'ulotlar bo'yicha ko'rsatma va tavsiyalar | <p>Amaliy mashg'ulotlar uchun qo'yidagi mavzular tavsiya etiladi.</p> <ol style="list-style-type: none"> <li>1. Neft va gaz sohasi korxonalari turlari va faoliyatlarini o'rganish.</li> <li>2. Yerning tuzilishi va strukturasini o'rganish.</li> <li>3. Neftning tarkibi va xossalarni o'rganish.</li> <li>4. Gazning tarkibi va xossalarni o'rganish.</li> <li>5. Neft, gaz va gazkondensatli konlar mahsulotlari va ularga qo'yiladigan texnik talablarni o'rganish.</li> <li>6. Quduq profili va konstruksiyasini o'rganish.</li> <li>7. Burg'lash minorasi vazifasi va tuzilishini o'rganish.</li> <li>8. Ko'tarish mexanizmlari. Tal tizimini tanlash va uning hisobi.</li> <li>9. Neft va gazni yig'ish va tayyorlash tizimi jihozlari.</li> <li>10. Favvora armaturasi konstruksiyalari va uni tashkil etuvchi elementlar.</li> <li>11. Shlangli chuqurlik nasoslari yer osti va usti jihozlari.</li> <li>12. Neftni fraksiyalarga ajratish jarayoni va olinadigan mahsulotlar turlarini o'rganish.</li> <li>13. Separatsion vazifalari va ularning turlarini o'rganish.</li> <li>14. Kompressor stansiyasi jihozlari turlarini o'rganish.</li> <li>15. Tabiiy gazni qayta ishlash jarayonlarida qo'llaniladigan qurilmalar texnologik jihozlarni o'rganish.</li> </ol> <p>Amaliy mashg'ulotlar multimedia qurilmalari bilan jihozlangan auditoriyada bir akademik guruhga bir o'qituvchi tomonidan o'tkazilishi zarur. Mashg'ulotlar faol va interfaol usullar yordamida o'tilishi, mos ravishda munosib pedagogik va axborot texnologiyalar qo'llanilishi maqsadga muvofiq.</p> <p>2.4. Laboratoriya mashg'ulotlari bo'yicha ko'rsatma va tavsiyalar</p> <p>Fan bo'yicha laboratoriya mashg'ulotlari namunaviy o'quv rejada ko'zda tutilmagan.</p> <p>2.5. Kurs ishi (loyihasi) bo'yicha ko'rsatma va tavsiyalar</p> <p>Fan bo'yicha kurs ishi (loyihasi) namunaviy o'quv rejada ko'zda tutilmagan.</p> <p>2.6. Malakaviy amaliyot bo'yicha ko'rsatma va tavsiyalar</p> <p>Talabalarining olgan nazariy bilimlarini mustahkamlash uchun o'quv amaliyoti o'taydilar. O'quv amaliyotining asosiy maqsadi ishlab chiqarish sharoitida qo'llaniladigan texnologiyalar va jihozlari to'g'risida talabalarda dastlabki kasbiy bilimlar va ko'nikmalar hosil qilishdan iborat.</p> <p>O'quv amaliyoti talabalarga neft-gaz quduqlarini burg'lash, mahsulot</p> |
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| <p>qazib olish va qayta ishlash jarayonlari zamonaviy texnologiyalari va texnologik sxemalarini, mashina va jihozlarni hamda ularning tuzilishi va ishlash prinsiplarini o'rganishni vazifa qilib qo'yadi.</p> <p>O'quv amaliyotini o'tashda talabalarining asosiy ishlash shakli axborot-qidiruv tizimida tavsiya etilgan adabiyotlar bilan institut Axborot resurs markazida va Internet resurslaridan foydalangan holda mustaqil ravishda shug'ullanishlari hisoblanadi.</p> <p>O'quv amaliyoti kafedraga tegishli laboratoriyalar va auditoriyalarda hamda o'quv poligonida o'tkaziladi. Amaliyot davomida auditoriya mashg'ulotlari guruhda amaliyot rahbari tomonidan, talabalarining mustaqil ishi esa institut axborot – resurs markazi o'quv zalida o'tiladi.</p> <p>Amaliyot davomida talabalar bohischi va amaliyot rahbari roziligi bilan ishlab chiqarish korxonalariga tanishuv sayohatlari uyushtirilishi mumkin.</p> <p>O'quv amaliyoti davomida o'zlashtirgan mavzulari bo'yicha talaba hisobot tayyorlaydi va amaliyotning ohirgi sanasida hisobotini himoya qiladi. O'quv amaliyotini o'tash bo'yicha kafedra tomonidan amaliyot dasturi ishlab chiqiladi.</p> <p>O'quv amaliyoti nazorati hamda uning o'tkazilishi, amaliyot bo'yicha kundalikni yuritish, hisobotni rasmiylashtirish va uning himoyasini tashkil etish bo'yicha amaliyot rahbarining yordami maslahatlar shaklida olib boriladi.</p> | <p><b>2.7. Mustaqil ta'lim va mustaqil ishlar</b></p> <p>Mustaqil ta'lim uchun tavsiya etiladigan mavzular:</p> <ol style="list-style-type: none"> <li>1. Neft va gaz puydo bo'lish nazariyasi.</li> <li>2. Neft va gazning sanoatdagi o'rni.</li> <li>3. Tog' jirlarining hosil bo'lishi.</li> <li>4. Neft va gaz mashina jihozlari haqida umumiy tushuncha.</li> <li>5. Neft va gaz uyumlari turlari.</li> <li>6. Neft va gazlarni qidiruv turlari.</li> <li>7. O'zbekistonning neft va gaz hududlari.</li> <li>8. Neft konlarini ishlatish usullari va texnologiyalari.</li> <li>9. Neftning tarkibi va xossalari.</li> <li>10. Tabiiy gazning tarkibi va xossalari.</li> <li>11. Gaz kondensati va uning xossalari.</li> <li>12. Neft va gaz quduqlarining maqsadi bo'yicha turlari.</li> <li>13. Neft va gaz quduqlarini burg'lash jarayoni.</li> <li>14. Burg'laning turlari.</li> <li>15. Neft va gaz quduqlarini ishlatish usullari.</li> </ol> |
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| <ol style="list-style-type: none"> <li>16. Gaz konlarini ishlatish usullari.</li> <li>17. Neft konlarida neft olishni oshirish usullari.</li> <li>18. Favvora armaturasi konstruksiyalari.</li> <li>19. Tebratma dastgoh tuzilishi va ishlash prinsipi.</li> <li>20. Plunjir jutiligi tuzilishi va ishlash prinsipi.</li> <li>21. Neft saqlash idishlari.</li> <li>22. Neft tindirgichlar vazifasi va konstruksiyalari.</li> <li>23. Neftgaz separatorlari.</li> <li>24. Vertikal gaz separatorlari.</li> <li>25. Absorberlar va ularning turlari.</li> <li>26. Rektifikatsion kolonnalar vazifalari.</li> <li>27. O'zbekistonda neft va gaz sanoatining rivojlanishi tarixi.</li> <li>28. O'zbekistonda gazkimyo sanoatining vujudga kelishi va istiqbolli.</li> <li>29. Neftni qayta ishlash jarayonida olinadigan mahsulotlar.</li> <li>30. Tabiiy gazni qayta ishlash orqali olinadigan mahsulotlar.</li> </ol> | <p><b>Fanni o'rganishning natijalari (shakllanadigan kompetensiyalar)</b></p> <ul style="list-style-type: none"> <li>- ma'lumotlarni qabul qilib olish, tahlil qilish, umumlashtirish, o'z oldiga maqsad qo'yish va unga erishish yo'llarini tanlash;</li> <li>- hankasblari bilan birgalikda ishlarni tashkil etish (kooperatsiya), jamoada birga ishlashga tayyor bo'lish;</li> <li>- o'z saviyasini yuksaltirishga, o'zining malakasi va mahoratini oshirishga intilish;</li> <li>- to'plagan tajribalarini tanqidiy mulohaza qilish, zaruriy hollarda o'zining kasbiy faoliyati yo'nalishini o'zgartirish;</li> <li>- zamonaviy ta'lim va informatsion texnologiyalardan foydalangan holda mustaqil ravishda yangi bilimlarni egallash;</li> <li>- ma'lumotlarni olish, saqlash va ularga ishlav berish asosiy metodlari va vositalarini yaxshi bilish, ma'lumotlarni boshqarish vositasi sifatida kompyuter bilan ishlash;</li> <li>- amaliy faoliyatida ijodiy yondoshuvni qo'llash, nazariya va amaliyotni birgalikda qo'shib olib borish.</li> </ul> <p>Fanni o'zlashtirishlari natijasida talabalar quyidagi ta'lim natijalarini namoyish qilishlari kerak:</p> <p><b>talaba bilishi kerak:</b></p> <ul style="list-style-type: none"> <li>- bitiruvchining oldida turgan vazifalar haqida; bitiruvchining egallashi kerak bo'lgan kompetensiyalar, bilimlar va mahoratlar to'g'risida umumiy ma'lumotlarni;</li> </ul> |
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