UNESCO-UNITWIN
OCW/OER INITIATIVE
HANDONG GLOBAL UNIVERSITY

[A-3]COURSE SYLLABUS

1. Course Description (Approximately 100 words)

The following are important in the structure of the science Liquids and gases: Ideal and adhesive liquids; in equilibrium, forces acting in fluid fluids; piezometric strips; Liquidity potential, D. Bernoulli and Lagrange-Koshi integral; laminar and turbulent fluid movement, relative kinetic energy of flow; hydraulic radius flow, average velocity, dynamic velocity, piezometric (hydrostatic), velocity and hydrodynamic prints, hydraulic inclination; Bernoulli equation for viscous fluid, Darcy-Veysbax, Shi formula, dynamic velocity; various types of resistance in the pipe; Liquid discharge: displacement and constant tidal flow, coefficient of flow compression; flowing through a large hole; the flow of the plane, severe and critical state equation; Investigation of free flow of the stream: solving of nonlinear flow equations on open prismatic rivers, flow equations in open openings, energy dissipation and its influence on hydraulic jump

2. Course Goals and Objectives (Approximately 100 words)

The aim of the course is to introduce hydraulic sciences to students studying mechanics, to teach them to use the laws and formulas based on experimental results and theoretical knowledge in technical and industrial facilities and hydraulic structures.
The object that is explored in this science is liquid and gas, which is easily deformable. This, in turn, requires special forms of mass, impulse, energy conservation laws, and the study of special methods for solving them.
Hydraulics is a science that reflects the modern level of engineering science with a wide range of practical applications in various technical fields, such as mechanical engineering, hydraulic engineering, river, lakes and rivers, water distribution problems, teaches how to test mechanical properties, and has used hydraulic engineering structures to solve hydrodynamic problems in the machine building industry

3. Textbook (Title, Author, Publisher, Year of Publication, etc.)

1. [illegible] ; 2004.
2. [illegible] ; 2004.
3. E.A. Tursunova, A.A. Mukolyans “Suyuqlik va gaz mexanikasi” O’quv qullanma. ToshDTU.; 2014

4. Reference

1. A.A. Karimov, A.A. Shokirov, A.A. Mukolyans “Gidrogazodinamika, naoslar, ventilyatorlar va kompressorlar” O’quv metodik qullanma. ToshDTU.; 2014
2. [illegible] ; 2012

5. Course Requirements and Grades

Course prerequisites:
Students should have the knowledge of "Higher mathematics", "Resistance of materials", " Theoretical mechanics", and "Drawing geometry".
Grading System:
Homework 15%
Design Project 15%
Mid-term Exams 35%
Final Comprehensive Examination 35%
Total 100%
5=86-100%
4=71-85%

6. Course Calendar

Week	Main Content
1	FANGA KIRISH .SUYUQLIKLARNING FIZIK XOSSALARI
2	GIDROSTATIKA. SUYUQLIKKA TA'SIR ETUVCHI KUCHLAR
3	QUVUR DEVORLARGA SUYUQLIKNING BOSIM KUCHI
4	SUYUQLIK XARAKATI. OQIM TENGLAMASI
5	BERNULLI TENGLAMASI
6	SUYUQLIKLARNING HARAKAT REJIMLARI
7	GIDRAVLIK QARSHILIKLAR VA ULARNING TURLARI
8	QUVURLARNI GIDRAVLIK XISOBLARI
9	SUYUQLIKLARNING TESHIK VA NAYCHALARDAN OQISHI
10	OPNEVMOYURITMALARDA ENERGIYA ALMASHINISHI. KURAKLI NASO
11	XAJMIY NASOSLAR
12	XAJMIY GIDROYURITMALAR
13	KUCH GIDROSILINDLARI
14	GIDROYURITMALAR