REPUBLIC OF UZBEKISTAN

MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATIONS

FERGANA STATE TECHNICAL UNIVERSITY

ENGINEERING BRANCH OF BUILDINGS

MODULE HANDBOOK

Field of Knowledge:	700000	– Manufacturing and technical sector
Field of Education:	7 3 0000	– Architecture and Construction
Education program:	60730300	- Civil Engineering

Fergana 2025

Module title	***Of buildings engineering networks***
Code (if available)	*ECBT56*
Semester(s) of module teaching	*5*
Responsible for the module	*Usmanova Nodirakhan Akramovna , Engineering communications construction Department , PhD, Associate Professor* *Abdujalilova Poet Saminjonovna , Engineering communications construction department , assistant*
Language of instruction	*Uzbek*
Connection to the curriculum	*Elective*
Teaching methods	*lecture , practical training , independent education .*
Study load (including classroom and independent study hours)	*total hours : 180 hour* *Auditorium hours : 72 hour* *lecture – 30 clock , practical training – 4 2 hours , independent education -108 hour .*
Credit units	***6***
Required and recommended prior knowledge for studying the module	*Physics , Higher Mathematics , Heat technique*
Module objectives/intended learning outcomes	***The purpose of the module:*** *To form and develop students' thinking in studying the rules for installing engineering equipment in buildings, the basics of design, and their application in production, to teach them to clearly state their opinions and conclusions in a well-founded manner, and to form skills and qualifications based on the knowledge acquired.* *To achieve the above goal, science students need to acquire theoretical knowledge, practical skills , and the ability to design buildings. engineering It also performs the tasks of forming a methodological approach and scientific worldview in systems .* *The following requirements are imposed on the knowledge, skills and qualifications of students in the subject .* ***The student:*** • *heating systems;* • *centralized heat supply systems;* • *buildings with cold and hot water provision networks and equipment;* • *cold water supply in buildings in systems pressure lift for applicable devices;* • *of buildings sewage water networks and equipment;* • *cooling, ventilation systems, equipment;* • *buildings gas with provision networks and equipment about to the imagination has to be ;* • *heating equipment of the central heating system;* • *regional (zonal) water supply system;* • *water pipes and fittings;* • *pumping equipment;* • *plumbing fixtures;* • *types of air conditioners and their main technical characteristics;* • ***Knowledge*** *of pipes and gas pipeline equipment*

	*used in gasification systems **necessary;*** • *thermal engineering calculation of barrier structures;* • ***Must have the skills** to calculate heat loss through barrier structures **;*** • *hydraulic calculation of the internal water supply system;* • *Internal sewage water system hydraulic account;* ● ***skills in** measuring and calculating gas consumption **has to be need .***
Content	*1. " Engineering branches of buildings " goal and tasks , development history and prospects .* *2. Buildings heating system basics .* *3. Thermal regime of the building . Heating system accounting power detection.Barrier of constructions heat technical calculation.Through the floor in buildings heat the disappearance calculation. Through the ceiling in buildings heat the disappearance calculation* *4. Heating system classification .* *5. Classification of heating devices . Heating tools choice and placement .* *6. Heating systems heat conductivity.Heating of the instrument heat transmission coefficient detection.Heating tool heat of the flow density . Heating of the instrument heat account* *7. Heating in the system pipe and fittings.Heating system hydraulic account* *8. Building ventilation system cooling and ventilation basics.To the room detachable harms amount anishlash.In the room air exchange amount determination.Natural ventilation system design .* *9. Air conditioning system . Air conditioning system account.Air conditioning system for air conditioner selection .* *10. Centralized heat supply system structure* *11. Building gas with provision foundations.Building gas supply system design.Gas spending to determine .* *12. The building cold and hot water supply.inolari cold water supply system design.Water spending Identify.Buildings hot water supply system design* *13. Cold water on the network used materials and fittings* *14. The building sewage water systems .* *15. Water water in systems equipment and equipment.Plumbing equipment and them placement.Inner sewage systems design .*
Forms of assessment	*oral, presentation, written work, practical assignments, laboratory work and final exam .*
Requirements for study and assessment	*To successfully complete the module, the student must attend classes and achieve the minimum scores set in the current, midterm, and final assessments.*
Bibliography	*1. S.R.Saydullayev “Binolarning injenerlik kommunikatsiyalari”. Darslik. Jizzah-2021 y.* *2. M.R.Ismanxodjayeva, F.X.Nishonov “Binolarning injenerlik kommunikatsiyalari”. O‘quv qo‘llanma. Toshkent-2019 y.*

	3. *B.X.Raximov "Shahar injenerlik inshootlari". Darslik. Toshkent Noshir 2019 y.* 4. *Yu.K.Rashidov "Binolarning energiya tejamkor muhandislik komminikatsiyalari" Toshkent TAQI 2019 y* 5. *T.Mamajonov, S.E.Bo'riyev, S.R.Nurmonov "Issiqlik ta'minoti" Toshkent TAQI 2018 y* 6. *Bo'riyev E.S., Zokirov U.T., Mamajonov T "Binolarning sanitar texnika qurilmalari va jihozlari" Toshkent TAQI 2016 y* 7. *E.O'.Madaliyev.,N.A.Usmonova.,Sh.B.Abduhalilova. "Issiqlik va gaz ta'minoti tizimlari" o'quv qo'llanma. Farg'ona - 2024.*
Reviewers	*M. Madaliyev - Fergana state technique University , Department of " Construction of Engineering Communications " Associate Professor (DSc);* *G. Mamatisayev - Fergana state technique University , Department of " Construction of Engineering Communications " associate professor (PhD);*