REPUBLIC OF UZBEKISTAN

MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATIONS

FERGANA STATE TECHNICAL UNIVERSITY

Construction machines

MODULE HANDBOOK

Knowledge of field :	700000	- Engineering, construction and construction industries
Field of education:	730000	- Architecture and construction
Education program :	60730300	- Civil Engineering

Fergana 2025

Module title	***Construction machines***
Code (if available)	***CMT43***
Semester(s) of module teaching	*4*
Responsible for the module	*Tojiev Rasuljon Jumaboyevich* *Technological cars and equipment department , professor* *Suleymanov Abdurahman Technological cars and equipment chair , large teacher PhD*
Language of instruction	*Uzbek , English*
Connection to the curriculum	*Elective*
Teaching methods	*lecture , practical training , independent education .*
Study load (including classroom and independent study hours)	*Total hours : 90 hours* *Auditorium Hours : 34 hours* *Lecture – 14 hours , practical training – 20 hours , independent 56 hours of training .*
Credit units	***3***
Required and recommended prior knowledge for studying the module	*Physics , Higher Mathematics , Heat technique*
Module objectives/intended learning outcomes	***The purpose of the module is*** *to teach students the theory of operation, types and structure of construction machines, as well as how to select and calculate the most suitable ones for specific construction conditions.* *To achieve this goal, undergraduates are provided with theoretical knowledge, practical skills, a methodological approach to practical work and processes, and the formation of a scientific worldview.* *The following requirements are imposed on students' knowledge, skills, and qualifications in science.* ***Student:*** • *The goal of the course is to develop knowledge, skills, and competencies appropriate to the field of study in students on the types, structure, scope of use, selection, basics of calculating technical and economic indicators of various construction machines and technical equipment used in construction organizations and enterprises, and methods for selecting them in accordance with specific conditions.* • *will acquire skills in teamwork, independent and critical thinking, communication culture, and drawing conclusions related to the profession;* • *will acquire the skills to complete, compile, and present science assignments on time;*
Content	***Module 1. Machine details about general information*** *Attachments, Extensions and them types, Steel ropes, axle, shaft, bearing and couplings, blocks and polystyps* ***Module 2. Construction of cars power transmissions and proceedings*** *Construction of cars walk Parts, Construction of cars energetic sources and power devices, machines movement equation, driving force and pull their forces calculation, feasibility study indicators and their account* ***Module 3 Earth digging machines*** *Grounds main features, them clipping and excavation,*

	preparation in their work used Cars, Earth digging and soil transportation machines. Scrapers, bulldozers and graders, excavators, their work and technical and economic indicators detection, Continuous working many with a spoon excavators, Hydro mechanization Equipment, Grounds and the basics compaction machines ***Module 4. Freight transportation and unloading machines*** *Trucks, tractors, pneumatic-wheeled vehicles forklifts, special vehicles, pneumatic transport, loading and unloading machines, continuous and periodic working Loaders, Load lifting lowering cranes, jacks, winches and their main indicators* ***Module 5. Construction cranes*** *Tower-shaped cranes and worker organ structure, technical indicators account, Cranes stagnation conditions and account, Arrow himself/herself walking assembly cranes, pneumatic and chained assembly cranes, their technician indicators account, Pipe bedspread and wired Cranes, Tower cranes, Special cranes and mechanisms* ***Module 6. Concrete and mixture preparation, concentration transmission machines*** *Mixers tasks, work principle and types, Concrete guards and pumps, concrete pipes through send equipment, concrete thickener tools compressors, their types and application Concrete mixtures thickener vibration machines* ***Module 7. Dwarf cars, small mechanization tools and devices*** *Makeup in their work applicable construction machines and Equipment, Portable plastering station, Coating decoration car and grinding car*
Forms of assessment	*oral, presentation, written work, practical assignments, and final exams.*
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	21. *RJ Tojiev etc. Construction machines . – Textbook . Fergana Alpha print, 2021. – 370 p.* 22. *Tojiev R.J. Stroitelnye mashinyyu - Uchebnik. Fergana. Alpha print, 2021. – 382 st* 23. *RJTojiyev , INAbdullayev . Construction Construction machinery processes Technology Part 1. Textbook . Fergana Alpha print, 2021. – 368 p.* 24. *Shri SM Mahashwari . India. COMPENDIUM OF CONSTRUCTION EQUIPMENT. 2010* 25. *R.J. Tojiev . Construction machines . Tashkent. Uzbekistan-2021. 304 pages.* 26. *M.S. KARIMOV, B.S. MIRZAEV, S.T. VAFOEV. STROITELNYE* 27. *CAR. uchebnogo posobiya. Tashkent-2020. 54 st.* 28. *Magomedov Akhmed Dalgatovich , Magomedov Rasul Magomedovich, Aylammatova Dagmara Aylammatovna . Construction machinery i* 29. *Oborudovanie. UChEBNOE POSOBIE. Makhachkala - 2019. 66 st.* 30. *V.S. Speshilova . Construction machinery and equipment, mechanical engineering. Metodicheskoe posobie Ulan -Ude 2015.*

	31. I.I. Romanenko. STROITELNYE MASHINY. Course lecture . Penza 2016
Reviewers	*ITKarimov - Fergana State Technical University, Department of " Technological Machines and Equipment " vvb . professor (DSc);*