## MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

**O. M. BEKETOV NATIONAL UNIVERSITY**

**of URBAN ECONOMY in KHARKIV**

**P. Firsov,**

**О. Lugchenko,**

**О. Kulakov**

**METAL STRUCTURES DESIGN**

LECTURE NOTES

*for all educational forms Bachelor’s Degree students on specialty*

*192 – Building Industry and Civil Engineering,*

*educational program “Civil and Industrial Engineering”)*

**Kharkiv**

 **О. М. Bеketov NUUE**

**2024**

UDC 624.014

Metal Structures Design : Lecture Notes for for all educational forms Bachelor’s Degree students on specialty 192 – Building Industry and Civil Engineering, educational program “Civil and Industrial Engineering” / P. Firsov, О. Lugchenko,
О. Kulakov ; О. М. Beketov National University of Urban Economy in Kharkiv. – Kharkiv : О. М. Beketov NUUE, 2024. – 100 p.

Authors:

PhD (Engineering), Ass. Professor P. Firsov,

PhD (Engineering), Ass. Professor O. Lugchenko,

Assistant О. Кulakov

Reviewer

**О. Kalmykov,** PhD (Engineering), Ass. Professor, Ass. Professor of Building Structures Department of O. M. Beketov National University of Urban Economy in Kharkiv

*Recommended by the Building Structures Department, record № 15 on 01.05.2024*

 © P. Fіrsov, О. Lugchenko, О. Kulakov, 2024

 © O. M. Beketov NUUE in Kharkiv, 2024