Bachelor's thesis: 87 pages, 1 appendix, 17 bibliographic references.

FINITE-DIMENSIONAL SPACE, JORDAN MEASURABLE SET, LEBESGUE MEASURE, PHASE FLOW, SECTIONALLY SMOOTH MEASURE, SMOOTH ELEMENTARY SURFACE, SURFACE MEASURE.

Object of research – measure theory as a part of functional analysis; surface measures on finite-dimensional spaces (by the example of $\mathbb{R}^m$).

Subject of research – classical and alternative constructions of measures of surfaces which have unit codimension in finite-dimensional spaces.

Purpose of research – presentation and analysis of the main approaches and methods of constructing surface measures in $\mathbb{R}^m$ and investigation of their equivalence for surfaces with unit codimension.

Research methods – modern instruments of mathematical analysis, ordinary differential equations theory and differential geometry.

Results of research – classical construction of area of two-dimensional surface in three-dimensional space has been presented; this approach has been generalized on the case of *k*-dimensional sectionally smooth surface in *m*-dimensional space; an approach of constructing surface measure with use of phase flow has been analyzed; equivalence of classical and alternative methods for surfaces with unit codimension has been proved.

Future investigations – analysis of equivalence of classical and alternative methods for surfaces with arbitrary finite codimension.