Table of contents

Introduction		V
Notations		XIII
Chapter I	Integral and Hermitian matrices	1
§1	Orderings	2
§2	Integral matrices	14
§3	Hermitian matrices	20
§4	MINKOWSKI's reduction theory	28
§5	Applications of reduction theory	37
Chapter II	Modular group and fundamental domain	42
§1	Symplectic group and half-space	43
§2	Modular group	54
§3	The fundamental domain $F(n;\mathbf{F})$	58
§4	Congruence subgroups	67
Chapter III	Modular forms	71
§1	Analytic class invariants	72
§2	The vector space of modular forms	83
§3	Modular forms with respect to congruence subgroups	92
§4	Relations between SIEGEL modular forms, Hermitian modular forms and modular forms of quaternions	96
Chapter IV	Theta-series	99
§1	Elementary properties of theta-series	100
§2	Theta-series as modular forms	110
§3	Theta-series with respect to even quadratic forms	117
§4	Singular modular forms	126
Chapter V	EISENSTEIN- and POINCARÉ -series	136
§1	Integrals	137
§2	EISENSTEIN-series	145
§3	POINCARÉ -series	157
§4	Metrization	166
§5	Algebraical independence	174

Chapter VI	Modular functions	182
§1	The field of modular functions	183
§2	Modular functions with respect to congruence subgroups and symmetric modular functions	189
§3	Relations between SIEGEL modular functions, Hermitian modular functions and modular functions of quaternions	192
Bibliography		196
List of symbols		200
Index		202