

## CONTENTS

Preliminaries		1
Chapter 1	- The concept of moduli	15
§1	Families	16
§2	Moduli spaces	21
§3	Remarks	26
Chapter 2	- Endomorphisms of vector spaces	28
§1	Families of endomorphisms	28
§2	Semi-simple endomorphisms	31
§3	Cyclic endomorphisms	36
§4	Moduli and quotients	37
Chapter 3	- Quotients	42
§1	Actions of algebraic groups	42
§2	Proof of Theorem 3.4	52
§3	Affine quotients	61
§4	Projective quotients	70
§5	Linearisation	81
§6	Historical note	90
Chapter 4	- Examples	93
§1	Elementary examples	93
§2	A criterion for stability	101
§3	Binary forms	110
§4	Plane cubics	112
§5	$N$ ordered points on a line	115
§6	Sequences of linear subspaces	119

Chapter 5	Vector bundles over a curve	124
§1	Generalities and historical remarks	125
§2	Coherent sheaves over $X$	129
§3	Locally universal families for semi-stable bundles	133
§4	Construction of the quotient	141
§5	Existence of a fine moduli space	146
§6	Proof of Theorem 5.6	151
§7	Bundles over a singular curve	164
Bibliography		171
List of symbols		178
Index		180