ane bundle relative to a projective embedding. First, the Chern classes of $E \cong (E \otimes L^{k}) \otimes L^{-k}$ can be expressed as polynomials in the Chern classes of $E \otimes L^{k}$ and L^{-k}.

See P408, property 3.

The Chern class of L^{-k} is

$$c(L^{-k}) = 1 - k\eta_D,$$

where D is a hyperplane section of M, and by Theorem B in Section 5 of Chapter 1 we may find a holomorphic embedding

$$M \longrightarrow G(r, N) \qquad (r = \text{rank } E)$$

inducing $E \otimes L^{k}$ from the universal bundle over the Grassmannian.

Since L is the hyperplane bundle, $L = [D]$ where $D = H \cap M$. H is a generic hyperplane. $c_1(L^{-k}) = -k\, c_1(L)$ by property 3 & 4 on P408. $\Rightarrow$ Since $c_1(L) = \eta_D$ by Proposition 2. on P141, $c(L^{-k}) = 1 - k\eta_D$. Since L is a positive line bundle over M, by Theorem B on P159.

$$H^q(M, \mathcal{O}(L^{k} \otimes E)) = 0 \quad \text{for } q > 0, \ k \geq k_0.$$

According to Theorem on P207, for k sufficiently large, the map $\iota_{E \otimes L^k}$ is an embedding by using Theorem B on P159. We may have to refer to Theorem on P207 rather than Theorem B on P159.

According to the preceding discussion, the Chern classes of