

$|H|$ is a linear system

\Rightarrow By Bertini's theorem, \exists a generic hyperplane H s.t. $H \cap M$ is smooth,

since $\bigcap_{H \in \mathcal{H}} H = \emptyset$ i.e. base locus is empty. //

By P139.

$$0 \rightarrow \mathcal{O}_M(E \otimes [-D]) \xrightarrow{\otimes s_0} \mathcal{O}_M(E) \xrightarrow{r} \mathcal{O}_P(E|_D) \rightarrow 0$$

$$(S_0) = D.$$

Let $E = L \otimes [H]^{\otimes \mu}$, $M \cap H = D$. H
 $//$
 $L \otimes [H|_H]^{\otimes \mu}$.

\Rightarrow We get

$$0 \rightarrow \mathcal{O}_M(L \otimes [H]^{\otimes \mu-1}) \xrightarrow{\otimes s} \mathcal{O}_M(L \otimes [H]^{\otimes \mu}) \xrightarrow{r} \mathcal{O}_V(L \otimes [H]^{\otimes \mu}) \rightarrow 0$$

For $\mu \gg 0$, we have both

$$H^0(V, \mathcal{O}(L + \mu H)) \neq 0.$$

by induction and

$$H^0(M, \mathcal{O}(L + \mu H)) \longrightarrow H^0(V, \mathcal{O}(L + \mu H)) \longrightarrow 0,$$

since

$$H'(M, \mathcal{O}(L + (u-1)H)) = 0. \text{ by Th.B.}$$