⌜ By P177, since $\iota : B \hookrightarrow E_L \subset \mathbb{P}^3$,
$\iota^* H^0(E_L, \mathcal{O}(H)) = H^0(B, \mathcal{O}(D)) = L$, H hyperplane in $\mathbb{P}^3$.
Note: E_L is nondegenerate, otherwise $g(E_L) = 2$
$= \frac{(5-1)(5-2)}{2}$ which is impossible. Here we can see that $\dim H^0(B, \mathcal{O}(D)) = 4 = \dim H^0(\mathbb{P}^3, \mathcal{O}(H))$.
$\Rightarrow$ By Kodaira embedding theorem, and its application P215,
$\deg D = 5 > \deg K_B + 2 = (2 \times g(B) - 2) + 2 = 4$,
$\iota_L : B \longrightarrow \mathbb{P}^3$ is well-defined and an embedding, where
$L = H^0(B, \mathcal{O}(D))$.
⌟

Second, since by Riemann-Roch

$$h^0(2D) = 10 - 2 + 1 = 9$$

and the vector space $H^0(\mathbb{P}^3, \mathcal{O}(2H))$ of quadrics on $\mathbb{P}^3$ has dimension 10, the restriction map

$$H^0(\mathbb{P}^3, \mathcal{O}(2H)) \longrightarrow H^0(B, \mathcal{O}(2D))$$

must have a kernel — i.e., E_D must lie on a quadric surface Q in $\mathbb{P}^3$.

⌜ By Riemann-Roch formula on P245,

$$h^0(2D) = \deg(2D) - g(B) + h^0(K_B - 2D) + 1$$
$$= 10 - 2 + 0 + 1 = 9,$$ since $\deg(K_B - 2D)$
$= \deg K_B - \deg(2D) = 4 - 10^{-2} = -6^{-2=-8}$, and by P215,
$h^0(K_B - 2D) = 0$. $\dim H^0(\mathbb{P}^3, \mathcal{O}(2H)) = {}_5C_2 = 10$, P166.
$\iota : B \longrightarrow \mathbb{P}^3 \Rightarrow \iota^* : H^0(\mathbb{P}^3, \mathcal{O}(2H)) \longrightarrow H^0(B, \mathcal{O}(2D))$