Let $n = 2,\ k = 0,\ p = q = 1.$

$\Rightarrow$

$$Q: H^2(M) \otimes H^2(M) \longrightarrow \mathbb{C}$$

$$(\sqrt{-1})^{1-1}\ (-1) \qquad Q(\xi, \bar{\xi}) = -Q(\xi, \bar{\xi}) > 0$$

$$\Rightarrow\ Q(\xi, \bar{\xi}) < 0$$

By the Lefschetz decomposition, $P^{1,1}$ has codimension 1 on $H^{1,1}$; thus if D is any divisor on M with $D \cdot D > 0$, the intersection pairing is negative definite on the orthogonal complement of η_D in $H^{1,1}(M)$.

According to Lefschetz decomposition on P 122,

$$H^2(M) = P^2(M) \oplus L\,P^0(M).$$

$$P^0(M) = \ker L^{2+1} : \underset{\underset{\mathbb{C}}{\cong}}{H^0(M)} \longrightarrow \underset{\underset{0}{\parallel}}{H^{4+2}(M)}$$

$$\Rightarrow\ P^0(M) = H^0(M) \cong \mathbb{C}$$

But since $L^2 : H^0(M) \longrightarrow H^4(M)$ is isomorphic, i.e.,

$$H^0(M) = P^0(M) \xrightarrow{L} L\,H^0(M) \xrightarrow{L} H^4(M)$$

$$L\,H^0(M) \cong H^0(M) \cong L P^0(M) \cong \mathbb{C} \cong P^0.$$

$$\Rightarrow\ H^2(M) = P^2(M) \oplus \mathbb{C} = P^{2,0}(M) \oplus P^{0,2}(M) \oplus P^{1,1} \oplus \mathbb{C}$$

$= H^{2,0}(M) \oplus H^{0,2}(M) \oplus P^{1,1} \oplus \mathbb{C}$ by 124. (by considering of type, $H^{p,0}(M) = P^{p,0}(M)$ and $H^{0,p}(M) = P^{0,p}(M)$).

$\Rightarrow\ P^{1,1} \oplus \mathbb{C} \cong H^{1,1}(M) \Rightarrow P^{1,1}$ has codimension 1 on $H^{1,1}$.

$V = \{ \varphi \in H^{1,1}(M) : Q(\eta_D, \varphi) = \int_M \eta_D \wedge \varphi = 0 \}$, which is the orthogonal complement of η_D in $H^{1,1}(M)$.