Let $T = (T, \tau)$ be a topological space. It is well known that the regular closed subsets of $T$ form a Boolean algebra, $RC(T)$, under inclusion with top element $1 = T$ and bottom element $0 = \emptyset$. A number of predicates in $RC(T)$ have a natural geometrical meaning, for example, the predicates $k$-contact, $k \geq 2$, defined by $C_k(a_1, \ldots, a_k)$ iff $a_1 \cap \cdots \cap a_k \neq \emptyset$. So, the structure $\mathfrak{A}_T = (RC(T), \{C_k\}_{k<\omega})$ is a model for the first-order language $\mathcal{L}$ extending the language of the Boolean algebras with the predicates symbols $C_k$, $k \geq 2$. In this way any class $K$ of topological spaces determines a theory $\Gamma_K$. We give an axiomatization of the universal fragment of $\Gamma_K$ in the cases $K$ is the class of all topological spaces, the class of all connected topological spaces and the singletons $\mathbb{R}^n$, $n \geq 1$. We treat these universal fragments as modal logics and prove the completeness theorems with respect to the finite Kripke structures and show that they are not strong complete.