Pre-Hilbert modules, normed modules and the parallelogram law

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The concept of pre-Hilbert C^*-module generalizes the concept of pre-Hilbert (inner product) space. A normed C^*-module can be analogously introduced as a generalization of a normed space (by equipping a module over a C^*-algebra with a map that obeys the same axioms as the vector space norm but with values in a C^*-algebra). The aim of this talk is to show that the parallelogram law holds in every normed module over a C^*-algebra A without nonzero commutative closed two-sided ideals and that this implies that the class of normed A-modules coincides with the class of pre-Hilbert A-modules.