topology of locally convex spaces is generated by seminorms

Canonical name	TopologyOfLocallyConvexSpacesIsGeneratedBySeminorms
Date of creation	2013-03-22 17:43:29
Last modified on	2013-03-22 17:43:29
Owner	asteroid (17536)
Last modified by	asteroid (17536)
Numerical id	4
Author	asteroid (17536)
Entry type	Theorem
Classification	msc 46-00
Classification	msc 46A03

Theorem - Let V be a topological vector space over $\mathbb{R}$ or $\mathbb{C}$. Then V is http://planetmath.org/LocallyConvexTopologicalVectorSpacelocally convex if and only if the topology of V is a family of seminorms.

Moreover, V is Hausdorff and locally if and only if the topology of V is a family of seminorms.