1058-05-72 **Ronald J. Gould*** (rg@mathcs.emory.edu), Department of Math and Computer Science, Atlanta, GA 30322. *On Saturated Graphs.*

A graph G on n vertices is said to be H-saturated if G does not contain H as a subgraph, but the addition of any edge to G produces H as a subgraph.

One of the classic questions in graph theory is what is the maximum number of edges in a graph that fails to contain H as a subgraph, that is, what is the maximum size of an H-saturated graph? This number is denoted $ex(n, H)$. This question has seen considerable work and produced a deep and rich theory.

The other extreme has been far less studied. That is, what is the minimum number of edges in an H-saturated graph? We denote this number by $sat(n, H)$.

In this talk we explore some of the basic facts about saturated graphs and consider some recent results on $sat(n, H)$ and clique saturated graphs in particular. (Received February 02, 2010)