# NUMBER THEORY SEMINAR

## *A Classification of Integer-valued Polynomials using a Generalized Factorial Function*

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<u>WHERE</u>: Chase 227

<u>ABSTRACT</u>:

An integer-valued polynomial is a polynomial with rational coefficients that takes an integer value when evaluated at an integer. It is clear that every polynomial with integer coefficients is integer-valued. However, it is also possible for an integer-valued polynomial to have rational coefficients. For example, the polynomial $\frac{x(x-1)}{2}$ still maps the integers to the integers, since one of $x$ and $x-1$ must be even. During my talk, I will introduce a classification of integer-valued polynomials on the integers and then show how to generalize this classification to subsets of the integers. In order to do this, I will first define a generalized factorial function using the associated p-sequence of the subset.

Any questions, please e-mail: rnoble@mathstat.dal.ca.