**Western University, Department of Mechanical and Materials Engineering**

**MME 9710: Advanced CFD**

*Assignment 1: Introduction to One Dimensional Diffusion Analysis*

**Submitted By:** Alex Kiar, 250731557

**Submitted To:** Dr. Straatman

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# Question 1: 1D Conduction

A plane bar experienced conduction heat transfer only. Two prescribed end temperatures were specified with a convection coefficient of zero. The prescribed temperatures required the use of the Direchlet boundary conditions for all grid sizes.

# Question 2: 1D Convection

# Question 3: Internal Heat Generation

# Question 4: Linearization Techniques