Valley City State University technology education Professor and Great Plains STEM Education Center director Donald Mugan retires June 15 after 39 years as a teacher and administrator at VCSU.

His family and friends are invited to an open house from 3:30 to 6 p.m. Friday at the Valley City Eagles Aerie “to wish him well,” said Mugan’s daughter Bridget Mugan Rohan Wednesday.


It is a new way of looking at science and math education to make the disciplines more attractive to the current generation of students.

Rohan said her father received his undergraduate degree from Mankato State University in Minnesota, and his master’s degree and Ph.D. from the University of Northern Colorado in Greeley, Colo.

A native of Emmetsburg, Iowa, Mugan began working for the VCSU Industrial Arts Department in 1973.

Mugan said he first taught electronics at VCSU, and became chairman of the science and technology department in 1990.

Mugan said he did much grant writing in the 1990s, and developed VCSU's on-line program.

In 1988 his family moved to Fargo, and he has commuted between Valley City and Fargo ever since. Mugan and wife Pat have four children: Rohan of Omaha, Neb.; Christa Crane of Fargo; Ryan Mugan of Grand Forks and Alex Mugan of Fargo.

Mugan, 66, said he decided to retire after being diagnosed with Amyotrophic lateral sclerosis or Lou Gehrig’s Disease “a few weeks before April.”

ALS is a disease of the nerve cells in the brain and spinal cord that control voluntary muscle movement.
In ALS, nerve cells (neurons) waste away or die, and can no longer send messages to muscles. This eventually leads to muscle weakening, twitching, and an inability to move the arms, legs, and body. The condition slowly gets worse. Mugan said his prognosis is not good. 
Mugan said one of his daughters is friends with the director of Cleveland Clinic, and the director agreed to see Mugan.

“I went to the Cleveland Clinic Wednesday (last week) for a final diagnosis,” said Mugan. 

Mugan said he will most miss things happening at VCSU, “working with the cutting edge” and helping VCSU “move to a higher level.”

As center director, Mugan saw himself as an evangelist in transforming math, science, engineering and technology education into a form that attracts students. 

It centers on re-educating teachers so they do a better job reaching students, and teaching students in a way that will hold their interest. Traditionally, Mugan said, math and science were taught abstractly and independently.

Using the STEM concept students are taught with practical projects requiring students to use all four disciplines to solve real world problems.

In an interview last year, Mugan said he saw his job as educating teachers, students and eventually the public.

Many high tech businesses including Microsoft and Intel are strong supporters of STEM.

Attracting new and established high-tech businesses to Valley City will provide a workplace for students being taught STEM.

Mugan said the STEM idea “is pretty widely accepted” as a way to get more people interested in science, technology, math and engineering, “and the Red River Valley research corridor has generated $700 million in research grants.”

Many current high school and university teachers are not very comfortable with modern technology or the STEM teaching method.

“To change, we need to change the teaching of teachers. Kids are being turned off.”

Mugan said “today’s students grew up in the Internet generation, while most instructors are ‘digital immigrants,’” he said.

Mugan told of an incident at VCSU where the presenter was a young teacher from Bismarck, “a graduate of our online program. His 3-year-old son went online and charged $40 worth of music at the Apple ITUNES store. Later his dad got the bill.”

He added, “We wonder why kids of today are turned off by 7 hours a day of droning lecture, when they can get real world stimulation everywhere but in the classroom?”