

Module 1: Application of C# Programming in Precision Agriculture

Time: Fall Term 2015/2016

Background

The .NET frame will be introduced, their application discussed, and hands-on programming sessions held. Particular topics include applications of programming in Visual C# in GUI development, interfacing and control of devices, image & data acquisition, and real-time process control. The module ends with project work and report submission by each student, aiming at solving a problem related to his/her thesis.

Prerequisites:

Enrollment in graduate program

Delivery: This module will be comprised of 8 weeks of 2 hour lectures/labs dealing with basics of Programming in C#:

Evaluation: Assessment of this module will be in lab coding, the form of weekly assignments and a single report to be submitted at the end of module.

- Laboratory exercise coding (20 %);
- Weekly assignment (30 %); and
- Individual project work (includes presentation and report) (50 %).

Instructors:

Dr. Qamar Zaman, Associate Professor and Precision Agriculture Research Chair

Dr. Young Ki Chang, Research Associate

Engineering Department, Faculty of Agriculture, Dalhousie University

Module 2: Image Processing Techniques with MATLAB for Precision Agriculture

Time: Winter Term 2015/2016

Background

This module will introduce graduate students in precision agriculture to the syntax of MATLAB. Particular topics include applications of programming in Matlab, interfacing, image and data processing. The module ends with project work and report submission by each student, aiming at solving a problem related to his/her thesis. This graduate module will be offered for the first time in the winter term of 2015/2016.

Prerequisites:

Enrollment in graduate program

Delivery: This module will be comprised of 6 weeks of 2 hour lectures/labs dealing with basics of Programming in MATAB and image processing tool box.

Evaluation: Assessment of this module will be in lab coding, the form of weekly assignments and a single report to be submitted at the end of module.

- Laboratory exercise coding (20 %);
- Weekly assignment (30 %); and
- Individual project work (includes presentation and report) (50 %).

Instructors:

Dr. Qamar Zaman, Associate Professor and Precision Agriculture Research Chair

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