HUMANS FOR PEACE
INSTITUTION

EABP Geospatial Consulting Inc. 2019

WELCOME TO THE HUMANS FOR PEACE INSTITUTION, GEOMATICS APPLIED LEARNING PROGRAM

EABP Geospatial Consulting Inc.

LEARN AND BUY THE PROGRAM

- To learn more about the HPI, Geomatics Applied Learning Program or to enroll in online classes, please visit:
- https://www.gisfreeway.ca

COMPUTER REQUIREMENTS

Hardware

- Students will need an Apple Mac with MacOS Catalina or later
- Apple Macintosh Processor: Intel or M1
- Hard drive: 500gb to 1tb hard drive
- Memory: 8gb - 20gb ram

COMPUTER REQUIREMENTS 2

OS/Software

- MacOS Catalina or greater,
- QGIS 3.22.7 Long Term Release (LTR),
- Blender with Blender GIS plugin,
- Orfeo Toolbox (Used for satellite image analysis), and
- Whitebox Tools (Used to process LiDAR datasets).

INTERNET SPEED

Recommended

- A high speed (Unlimited Data) 300mbps or greater internet connection

DOWNLOAD DATASETS AND ENROLL IN ONLINE CLASSES

- To purchase and download the Geomatics Applied Learning Program, head to the GIS Learning Centre website https://www.gisfreeway.ca, click the GIS store link. Click the buy now link. Once payment has been verified you will receive a payment confirmation email with program download instructions

Note: The online-class ticket using Zoom is included as part of each course package. Joining the online-classes is optional, as the in-class-demos and assignments have been designed for both online and offline (self) learning.

- To download the course zip file, open your default email program, check for new email. Open the payment confirmation email, click the provided download link and download the course zip folder to the Downloads folder

Note: The course zip folder is large and may take time to download depending on your internet connection.

- To unzip the course zip file, double click the file. If it does not unzip due to a compatibility issue, download the Un-archiver program from the MacOS App Store and click to install it
- Extract the course by right clicking the file and select open with Un-archiver. Unzip the file to the Documents folder
- To unzip the datasets, open one of the course folders (e.g., Remote Sensing), double click one of the in-class-demo folders (e.g., Image Enhancement and Analysis In-Class-Demo), double click the Data folder. Double click the Data.zip or right click and select Un-archiver, click to extract here or to the Documents folder

INTRODUCTION

This program has been developed to help students, improve their knowledge and skills in Geographic Information Systems. Students will gain a practical understanding of how Geographic Information Systems can provide solutions or help solve real world issues.

Many current GIS programs are very complex and can make learning the subject a challenging and time-consuming task. The use of GIS application programs in the workforce is still limited.

PROGRAM OBJECTIVES

When completed, students will have learned:

- The history of Geographic Information Systems (GIS)
- How to setup a project and re-project datasets from one coordinate system to another
- How to geo-reference and rectify a scanned paper map image of Alberta, Canada using provided Canada datasets
- How to create a layout and publish a map to image and geo-pdf formats
- How to perform enhancement and analysis operations using Landsat 8 datasets
- How to perform a supervised classification, vegetation change detection analysis using Landsat 8 datasets
- How to conduct a terrain analysis and create a Digital Surface Model (DSM) of Mount St. Helens using LiDAR point data
- How to perform a Sea Level Rise Analysis and create a Digital Terrain Model (DTM) of St. Andrews, Scotland, using LiDAR point data
- How to import and process raw GPS Waypoint data to create an Ottawa, Gatineau GPS Survey Photo Story map **(Coming Soon)**

Geomatics Applied Learning Program Content

QGIS Introduction	Remote Sensing
GIS Introduction – A History QGIS Setup – Installation and Configuration	Remote Sensing - An Introduction
Coordinate Systems – In-Class-Demo	Image Enhancement and Analysis – In-Class-Demo
Georeferencing and Rectification – In-Class-Demo	Supervised Classification Analysis – In-Class-Demo
Layout and Publishing – In-Class-Demo	Mount St. Helens, Terrain Analysis – In-Class-Demo
	St. Andrews, Scotland, Sea Level Rise Analysis – In-Class-Demo

SOFTWARE INSTALLATION

Please consult the QGIS Introduction Lecture to install the following software before proceeding with the In-Class-Demos and/or Online-Classes:

- QGIS 3.22.7 LTR including plugins
- Orfeo Toolbox
- Whitebox Tools
- Blender with BlenderGIS plugin

PROGRAM INSTRUCTION

Teacher	Email
Eric Purdie	eabpgeospatial@rogers.com

PROGRAM TIMELINE

- The HPI, Geomatics Applied Learning Program has been designed to be completed within a reasonable time frame
- Please note: Every computer is different even if it has the same software and operating system installed. Leave plenty of time when working through this program

WEB SUPPORT

If you run into any problems, please fill out the contact form or email us:
https://www.gisfreeway.ca eabpgeospatial@rogers.com

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GOOD LUCK ON YOUR GEOGRAPHIC INFORMATION SYSTEM JOURNEY

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