Course Instructors | George Bevan | Email: bevan@queensu.ca
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Offices | Mac-Corry D130/MS Teams |
Contact Time | TBA |
Format | 3 hour practical seminars weekly on MS Teams |
Class Assessment | Six short assignments (2-3 pages; 5% each); Participation (asking/answering questions; 10%), Final Presentation (20%), Final Report (20%) |

**COURSE OVERVIEW**

This course will provide an intensive introduction to modern digital photogrammetry software and applications. In other words, how do we take measurements from photographs and create outputs suitable for use in GIS, CAD or geotechnical software. Particular attention will be paid to terrestrial and aerial mapping operations. In the case of the former, we will perform geotechnical mapping and produce stereonets. The latter will concentrate on stereoplotting and effective strategies for producing maps from aerial photographs. UAV/RPAS, i.e. drone, data will be highlighted in the course. No background in photogrammetry is expected, although some prior experience with the fundamentals of Remote Sensing is helpful.

**LEARNING OUTCOMES**

1. To operate modern digital photogrammetry software critically
2. To plan photogrammetric mapping operations and optimize parameters
3. To assess and report photogrammetry projects both verbally and in writing
4. To identify important technical terms and fundamental concepts in photogrammetry

**COURSE TOPICS**

Aerial Mapping, Structural Mapping, Stereonets, CAD, Stereoplotting, Mission Planning, Interior/Exterior Orientation, Absolute Orientation (GCPs and Air Stations), Assessing Accuracy (RMSE and statistical models), Meshing, Dense Stereo-matching

**COURSE READINGS**

Wolf, P. R., Dewitt, B., & Wilkinson, B. (2014). Elements of Photogrammetry with Applications in GIS. McGraw and Hill education. Available online through the Queen’s library: https://ocul-qu.primo.exlibrisgroup.com/permalink/01OCUL_QU/1m1jubc/alma9952270604605158