

Course : Advanced Photogrammetry

Course Number : 447.537 Credit : 3

Lecturer : Kiyun Yu (Building 35 Room406 880-1355 kiyun@snu.ac.kr)

1. Summary of Course

This lecture is to understand digital photogrammetric theory and its applications. For this students learn about photos and camera mechanics, orientations and sensor modelling, 3 dimensional city modelling, digital image productions, image processings, orthophoto generations, digital elevation models, map generations, and GIS applications. Lecturer provides all the topic review and correspondingly students prepare their reports to share with other students.

2. Text Book

Main Text : Elements of Photogrammetry(4th ed.), P.A.Wolf et al, McGrawHill, 2014.

References : Digital Photogrammetry(volume 1), Schenk Tony, Terra Science

3. Lecture Schedule

Entire lecture is divided into 4 parts. From part1 to 3, the lecturer review all the topic one by one explaining in detail along with question and answer style discussions. At part4, students prepare and share their own reports with other students.

- 1/4 part : general theory of digital and analogue photogrammetry including wave theory, emulsions, color presentation, sensor

types and characteristics, geometry of photos, vertical photos, oblique photos, image interpretations, coordinate systems, transformations

- 2/4 part : collinearity condition, coplanarity condition, orientations, interior orientations, exterior orientations, aero triangulations, self-calibrated triangulations
- 3/4 part : control points, project planning, digital elevation model generations, ortho photos, GIS applications, GPS
- 4/4 part : students reports presentation and sharing their experiences with other students

4. Evaluation

students reports 70%, lecture attendance 30%