

Digital Image Processing Course syllabus – Undergraduate Course
Geomatics (Surveying) Engineering Department
academic study year 2023-2024
Salahaddin University-Erbil
Course Leader: Asst. Prof. Dr. Dleen Al-shrafany

Lecture	Topics
1	Introduction and required course materials
2	Principles and fundamentals of Image processing
3	Digital Image Analysis
4	Processing of Image and Digital Image Processing Ideas (DIP)
5	Digital Image and Image Resolution
6	Pre-Processing of Satellite Image
7	Noise removal
8	Radiometric correction
9	Geometric correction
10	Image Enhancement
11	Contrast manipulation
12	Gray level thresholding
13	Level slicing
14	Contrast stretching
15	Spatial filtering: Low pass and high pass

References:

- John Jensen (2016). "**Introductory Digital Image processing: A Remote Sensing Perspective**"(4th edition.). Prentice-Hall - ISBN: 0-13-145361-0
- Robert Schowengerdt (2007). "**Remote Sensing: Models and Methods for Image processing**" (3rd edition). Elsevier. ISBN: 0-12-369407-8
- Research article handouts.
- Links to websites covering relevant topics.