Programme	Semester 3	Course Code	RS-204	Credit Hours	3
Course Title	Introduction to Photogrammetry				

Course Introduction

- This course provides basic knowledge about the key elements of photogrammetry and its procedures/techniques. And to understand stereo photogrammetry and its applications

Learning Outcomes

On the completion of the course, the students will:

1. Aerial Photograph
2. Data acquisition
3. Histroy
4. Sensors

	Course Content	Assignments/Readings
Week 1	Introduction: History, overview and importance of photogrammetry	
	Analog, and digital photogrammetry	
Week 2	Sensor, films and filters	
	Data acquisition methods	
Week 3	Types of aerial photographs: vertical, oblique, terrestrial, convergent and trimetrogon photographs,	
Week 4	Flight configuration of aerial photography: forward & side lap and forward gain	
Week 5	Aerial photograph's marginal information	
Week 6	Methods for calculation of scale and area: descriptive, graphical and representative fraction method,	
Week 7	Interpretation of aerial photographs: shape, shadow, size, pattern, tone, texture and association,	
Week 8	Stereovision, Ray's Diagram, Porro-Koppe's principle, Stereoscopic analysis	
Week 9	Introduction to Digital Photogrammetric Work Stations (DPWS),	
Week 10	Concepts of UAVs, LIDAR and their applications, DEM, DSM and DTM generation and their comparison, Ortho-photography/Ortho-image, applications: visual interpretation, identification	

	and extraction of natural and man-made features	
Week 11	Flood damage assessment and various types of mass-movement	
Week 12	Visual interpretation	
Week 13	Identification and Extraction of various land features	
Week 14	DEM generation	
Week 15	Height measurement, scale & area calculations	
Week 16	Contouring by using Stereoscope and Photogrammetric Work Station	

Textbooks and Reading Material

1. David, P. P., & James D. K. (2012). Aerial Photography and Image Interpretation 2nd Edition. John Wiley & Sons, Inc. New Jersey.ISBN-13: 978-0470879382
2. Edward, M., Mikhail, J. S., Bethel, J., & Chris McGlone. (2001). Introduction to modern photogrammetry 1st Ed. Wiley, ISBN: 9780471309246
3. Golwell, R.N. (1960). Manual of photographic Interpretation, New York.
4. Judge, A.W. (1950). Streeoscopic photography: It application to science, industry and education. London.
5. Karl, K. (2004). Photogrammetry – Geometry from Images and Laser Scans 2nd Ed. Walter de Gruyter, Berlin.ISBN: 9783110190076
6. Paul, W., DeWitt,B., &Wikinson, B. (2014). Element of Photogrammetry with Application in GIS. McGraw Hill. ISBN-13:978-0071761123
7. Wilfried, L. (2009). Digital Photogrammetry – A Practical Course 3rd Ed. Springer. ISBN:9783540927259

Teaching Learning Strategies

1. Lectures
2. Written Assignments
3. Quizs
4. Lab Work

Assignments: Types and Number with Calendar

1. Practical
2. Quiz
3. Presentation
4. Assignment