

GANPAT UNIVERSITY									
FACULTY OF ENGINEERING & TECHNOLOGY									
Programme		Bachelor of Technology			Branch/Spec.		CIVIL Engineering		
Semester		VI			Version		2.0.0.0		
Effective from Academic Year			2019-20		Effective for the batch Admitted in			2014-2015	
Subject code		2CI 602		Subject Name		ADVANCED SURVEYING			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3		1		4	Theory	40	60	100
Hours	3		2		5	Practical	35	15	50
Pre-requisites:									
SURVEYING									
Learning Outcome:									
After Completion of the Curriculum of Advanced surveying students can get updated with the advanced or modern technology of surveying. They will have the knowledge about Tachometry Survey, Topographical Survey, total Station and aerial photogrammetry also they are aware with the astronomical aspects as well as modern technology which include Remote Sensing, GIS and GPS.									
Theory syllabus									
Unit	Content								Hrs
1	Tacheometric Survey: Introduction, principles of tachometry, different systems of tachometry, reduction tachometry, errors in tachometry								8
2	Geodetic Surveying: Principles, classification of triangulation systems, selection of stations, signals and towers, Baseline measurement and correction, extension of base, base net, satellite station, reduction to center.								4
3	Theory of Errors: Introduction, technical terms, law of accidental errors, laws of weights, most probable value Of observed quantities, triangulation adjustment.								8
4	Photogrammetric Survey: Introduction, definition it terms, aerial photogrammetric, vertical photographs, Scale of photo, Relief displacement, Co-ordinate system, flight planning, ground controls for aerial photogrammetric, photo maps and mosaics, stereoscopy, Mirror stereoscope with parallax bar, Height determination.								4
5	Other methods of Surveying: Basic aspects of field astronomy, astronomical terms, coordinates systems, time relations								

6	<p>Advanced techniques of Surveying:</p> <p>Introduction to electronic distance measurement techniques, introduction to remote sensing, principles and applications of remote sensing, Fundamental and application of Geographical Information System and Global positioning system, Fundamental and application of Total Station in construction.</p>	
Practical content		
Practical and Term work shall be based on the above mentioned course content.		
Text Books		
1	Surveying Vol-I &II By B.C.Punamia, Laxmi Publication.	
Reference Books		
1	Dr. K. R. Arora, " Surveying and Leveling, Vol. I & II ", Standard Publications.	
2	Kanitkar&Kulkarni, " Surveying and Leveling, Vol. I & II ", VidyarthiGruhPrakashan	
3	K. S. Duggal," Surveying and Levelling, Vol. I & II", TMH Edition.	
4	Bansal, " Surveying and Levelling Practice", TMH Edition	
5	Advanced Surveying By A.M.Chandra,New Age International Pvt Ltd Publishers	