SAINT CLARET COLLEGE, ZIRO
B. A. (GEOGRAPHY)
SYLLABUS AS PER RGU SEMESTRAL SCHEME
(Subjected to syllabus enrichment by SCCZ for Claretines)

Semester VI

GEOGCT 353: DIGITAL IMAGE PROCESSING & SPATIAL DATA ANALYSIS (A) & FIELD STUDY REPORT (B)

Breakup of marks with time	**Questions to be set for End term Examination**
Total marks : 80 (Practical)	
End term Exam : 64 (3hrs)	a. 4 (four) compulsory questions to set i.e. 4 x 12 marks b. Practical record : 8marks c. Viva voce : 8 marks
Internal Exam : 16 (1 ½ hrs)	Any two exercises 2 X 6 = 12 marks; Record 2; viva 2

Objectives: Having studied this paper, a student will be able to-

a. *Learn about how to handle GIS software's.*
b. *Do Geography Practical's by using GIS software's.*
c. *Do computation of large geographical data with sophisticated technologies.*
d. *Do scientific analysis of geographical phenomenon.*
e. *Prepare maps, Diagrams, download satellite imageries, analyse satellite images.*

Unit 0: Baseline Analysis- : Assessment of baseline knowledge; revision of basic concepts; Practical exercises in Laboratory; Goal-setting

Exercise no. 1: Land use Land Cover Mapping using Remote sensing data
(FCC / A4 size printout of satellite image as available in open source)

Exercise no. 2: Normalized Differential Vegetation Index (NDVI)

Exercise no. 3: Unsupervised Classification

Exercise no. 4: Georeferencing of Toposheets / maps (coordinate and feature based)

Exercise no. 5: Digitization of Point, line and polygon

Exercise no. 6: Buffer analysis (point, line, polygon)

Exercise no. 7: Attribute table and attribute map

Exercise no. 8: Mobile mapping (GPS)

FIELD STUDY REPORT (B): For 20 marks

Breakup of marks	**Questions to be set for End term Examination**
Total marks : 20 (Practical)	
End term Exam: 16 Internal Exam : 4	Report (8) Viva-voce (8): Project Report has to be submitted one week before the commencement of examination Viva-voce

The project report is based on the supervised field work for appropriate duration, which will be conducted in appropriate or nearby places. The teacher in-charge is to select a suitable study area and conduct the survey for the collection of primary/ secondary data. The students are to submit project report at the end of the term.

Recommended Readings:

1. Jensen J. R., 2004: Introductory Digital Image Processing: A Remote Sensing Perspective, Prentice Hall.

2. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: Remote Sensing and Image Interpretation, Wiley. (Wiley
Student Edition).

3. Nag P. and Kudra, M., 1998: Digital Remote Sensing, Concept, New Delhi.

4. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi