SECOND-YEAR OF BACHELOR OF ARTS
OPEN ELECTIVE COURSE REVISED SYLLABUS ACCORDING TO CBCS NEP2020

COURSE TITLE: RASTER ANALYSIS IN SAGA
SEMESTER-IV, W.E.F. 2024-2025

RECOMMENDED BY THE BOARD OF STUDIES IN GEOGRAPHY
AND
APPROVED BY THE ACADEMIC COUNCIL

Devrukh Shikshan Prasarak Mandal's
Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh.
Tal.Sangmeshwar, Dist. Ratnagiri-415804, Maharashtra, India

Academic Council Item No: 03

Name of the Implementing Institute	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangmeshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Bachelor of Arts
Name of the Department	:	Geography
Name of the Class	:	Second Year
Semester	:	Fourth
No. of Credits	:	02
Title of the Course	:	Raster Analysis in SAGA
Course Code	:	GEOE203
Name of the Vertical in adherence to NEP 2020	:	OPEN ELECTIVE COURSE
Eligibility for Admission	:	NA
Passing Marks	:	40%
Mode of Assessment	:	Formative and Summative
Level	:	UG
The pattern of market distribution for TE and CIA	:	60:40
Status	:	NEP-CBCS
To be implemented from the Academic Year	:	2024-2025
Ordinances /Regulations (if any)		

Syllabus for Open Elective Course

(With effect from the academic year 2024-2025)

SEMESTER-IV **COURSE CODE: GEOE203**

Course Title: Raster Analysis in Q-GIS **No. of Credits - 02**

Type of Vertical: Open Elective Course

Learning Outcomes Based on BLOOM's Taxonomy:

After completing the course, the learner will be able to…

Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome
CLO-01	Remember	recall the fundamentals of the raster database.
CLO-02	Understand	describe the process of the raster analysis in SAGA.
CLO-03	Apply	apply the raster analysis technique for spatial analysis.
CLO-04	Analyze	analyze the different tools available for raster analysis techniques for spatial analysis in SAGA.
CLO-05	Evaluate	evaluate the outputs of raster analysis in SAGA.
CLO-06	Create	Create an analytical map using the raster analysis techniques in SAGA software.

Syllabus for Open Elective Course

(With effect from the academic year 2024-2025)

SEMESTER-IV **COURSE CODE: GEOE203**

Course Title: Raster Analysis in Q-GIS **No. of Credits - 02**

Type of Vertical: Open Elective Course

COURSE CONTENT			
Module No.	**Content**	**Credits**	**No. of Hours**
2	○ Introduction to SAGA GIS ○ Understanding Image ○ Visual Image Interpretation ○ Georeferencing ○ Mosaicking and sub-setting Image ○ Introduction to Filters ○ Unsupervised Classification ○ Supervised Classification ○ Terrain Analysis ○ Change Detection	02	60
	Total	02	60

Required Previous Knowledge

The learner should know the Basics of GIS and Computer.

Access to the Course

Any student from the commerce and science faculty who completed an open elective course on the Basics of Q-GIS is eligible to be admitted for the course.

Methods of Assessment:

Vocational skill Courses, Skill Enhancement Courses and courses having laboratory sessions shall be assessed at the end of each semester.

Grading Scale

The grading scale used is O to F. Grade O is the highest passing grade on the grading scale, and grade F is a fail. The Board of Examinations of the college reserves the right to change the grading scale.

References:

1. SAGA Manual
2. Peter A. Burrough and Rachael A. McDonnell, 2011, Principles of Geographic Information Systems, Oxford University Press.
3. Ian Heywood, Sarah Cornelius, and Steve Carver, An Introduction to Geographic Information System, 2010, third edition, Pearson Education Ltd.
4. David O'Sullivan and David J. Unwin, 2010, Geographic Information analysis, second edition, John Wiley & Sons.
5. Paul A. Longley, Michael F. Goodchild, David J. Maguire, David W. Rhind, 2011, Geographic Information Systems and Science, third edition, John Wiley & Sons.
6. John R. Jenson and Ryan R. Jensen, 2013, Introductory Geographic Information system, Pearson Education.
7. https://dst-iget.in/remote-sensing/