

IQAC recommendation

IQAC, Vivekananda College, Thakurpukur, met on 18/June/2022, to envisage, formulate and design Add-On Courses, beyond prescribed Curriculum. The IQAC has also decided to organise a program on staff training:

- A. It was decided that all the departments of Humanities, Science and Commerce would design and formulate 30 hour Add-On Courses for 2022-23, Academic calendar, as per UGC guidelines.
- B. It was decided that the Departments would be free to choose the Courses on the basis of their (subject) relevance, practicality and feasibility.
- C. It was decided that the Departments would have a Course Coordinator, who would design the Course and Course materials, in consultation with all teachers of the Department.
- D. It was decided that each Department would design their own format; and could follow a blended mode of instruction.
- E. It was decided that the Departments would be encouraged to use and utilize their own resources while formulating the Add-On Courses, rather than relying on Outsourcing.
- F. IQAC would send its recommendations to the Principal/TIC for perusal and implementation.
- G. The IQAC would also organise a Staff Training programme - 'Effective Working Style' Conducted by IPE Of Professional Excellence On 25th June 2022 .



Co-ordinator
IQAC
Vivekananda College
Kolkata-700 083



VIVEKANANDA COLLEGE

(GOVT. SPONSORED) (NAAC ACCREDITED GRADE 'A')

(033) 2497 6824
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Ref. No.....

Date.....

Notice

It is hereby notified that Vivekananda College, Thakurpukur, will offer Add-On Courses to All Honours students for the Academic year 2022-23.

Each Department will offer an Add-On Course as per UGC guidelines. Each Course will be structured & overseen by a Course Coordinator, selected from the respective Department. Departmental Heads are requested to take up the matter on an urgent basis.


Principal

Principal
Vivekananda College
Thakurpukur, Klr-53

NOTICE

DEPARTMENT OF GEOGRAPHY,
VIVEKANANDA COLLEGE, THAKURPUKUR

Dated: 4th July 2022

All the faculty members of the concerned department are hereby requested to attend a departmental meeting on 7th July, 2022 from 2.30 pm onwards positively for discussion and selection of Add-On Course and Course Coordinator as per the Principal's notice dated on 24/6 /22.

Alokika Mangal
Alokika Mangal

HoD, Geography

04/7/2022
HEAD
DEPARTMENT OF GEOGRAPHY
VIVEKANANDA COLLEGE

Resolutions and outcomes from the departmental meeting held on 7th July, 2022

- In the Departmental meeting dated 7th July, 2022 the teachers of Department of Geography unanimously decided that 3rd year Honours students would be offered a 30 hour (comprising 8 classes of 1 hour duration each and 11 classes of 2 hours duration) Add on Course on "Geo Spatial Science".
- The choice of this "topic" is made not only for its existing demand and immense potential and applicability but also 'Geo Spatial Science' is not only confined within the domain of Geography but also adopted by the fraternity of researchers in almost every discipline.
- It is also decided in the meeting that Mr. Labani Sarkar, Department of Geography, would be the Course Coordinator for the Add on Course on "Basic Course on Geospatial Science" for the Academic session 2022-2023.
- It is also decided that the Coordinator would prepare a comprehensive Course structure with all considerations and after consultation with everyone. The course details would be shared with students interested in the course.
- The enrolment of students would be done by the Course Coordinator, with the help of all the teachers of the department. The Course Co-ordinator would be responsible for maintaining the Attendance of all the students enrolled in the Add-on Course.

→ It was decided that that the syllabus/ portions would be appointed among teachers of the department by the course coordinator. Each teacher would be responsible for keeping a record of classes taken and students' attendance.

→ Certificates will be given to each student after submitting the project.

→ The add on course on 'Geospatial Science' would be conducted in a blended mode for the session 2022-23.

Signature of the faculties:

1) Raishali Mukherjee

2) Alitika Mangal

3) Ady

4) Labani Sankar

Department of Geography

Basic Course on Geospatial Science

Today, the world is being monitored day and night constantly by high resolution sophisticated earth resources satellites. Availability of repetitive and high-resolution remote sensing (RS) data has increased the scope of identifying, monitoring and evaluating constant change of earth surface due to manmade and anthropogenic activities. In spite of having gained international recognition at a very early stage, these technologies are now gradually gaining its momentum in Indian subcontinent as well. Teaching and learning with GIS technology has always been focused on higher and nobler goals than simply learning GIS skills and tools. Learning GIS is an important skill set, but the ultimate goal is to understand an issue or a problem in a deeper and in more holistic way. As the field is emerging day by day, students of geography and related disciplines are encouraged to learn these technologies as these will not only help them gaining subject knowledge but it will open new pathways just after graduation.

IMPORTANCE:

- **Spatial thinking** is crucial to understand our increasing interconnected, complex world and it's key to solving these various problems we are facing in that world. Spatial thinking is greatly enabled by using the interactive maps made possible through GIS.
- **It will encourage critical thinking:** Critical thinking must include three aspects like **critical** thinking about data, critical thinking about methods and critical thinking about Maps.
- **GIS was created to solve problems:** Using GIS in education helps students to frame, visualize and to help them to grapple with problems. It even enables students to create solutions to those problems, whether they are about natural hazards, climate, urban greenways, litter, energy, social inequity or other complex issues of our day. Project Based Learning (PBL) implies active learning and GIS is a natural fit because using GIS, students are actively engaged as scientists, planners and other decision-makers.
- **The effective use of GIS:** The effective use of GIS is keenly tied to this process of inquiry.
- **We should recognize that GIS does provide students with career skills** that will never go out of style. Students who use GIS become valuable employees for non-profit organizations, academia, government agencies, ranging from local to international; and private industry. They are able to make decisions, work with data, and see holistically.

SPECIFICALLY DESIGNED FOR UNDER GRADUATE STUDENTS:

- As per the CBCS syllabus (SEM-3, 5) several parts contain topics that relates to remote sensing, GIS & GPS. If students could get a basic training that will help them to dig deeper into the subject knowledge.

- In this competitive environment students mainly coming from humanities background find difficulties to choose career pathways other than academics which will relate to their subject knowledge.
- Map making skills will help them to do small-scale project/ independent research work.
- In geography Remote Sensing and GIS is a part of curriculum as a core paper so prior knowledge will help the students to have profound understanding about the subject.
- Not only Honours students but also students pursuing general degree will also get a chance to gain a professional skill that will help them in future works.
- After having diploma/degree from a renowned institution students could use their knowledge as freelancers.
- Not only Geography but students coming from Environmental Science, Computer Science and other related disciplines will also get a sound knowledge of this field which will further help them in future endeavor.

TENTATIVE TIMING:

- Once in a week.
- After college class hours on Saturdays.

PLANNING AND TENTATIVE DURATION OF THE COURSE:

- ❖ Duration of the course- **3 months**
- ❖ Students will be provided with the theory or practical classes every week.
- ❖ After completing **3 months** of training students will be evaluated by a theory and a practical exam.
- ❖ Theory materials and book recommendation will be provided by the respective faculty members.

❖ **STRUCTURE OF THE MARKS DIVISION:**

Sl. No.	Module Name	Marks
1	Remote Sensing & GIS (Theoretical)	50 (40 marks written 10 Marks attendance) 30 marks MCQ & 20 marks SAQ
2	Remote Sensing & GIS (Practical)	50 (40 marks practical 10 Marks attendance)

- ❖ After successfully completing the entire course and submitting the project based on course learning result and certificates will be given to students.
- ❖ **IMPORTANT NOTES:**
 - I. Total intake capacity will be decided on the basis of lab facility.
 - II. Internal assessment will be based on class attendance and class performance.
 - III. Project work is compulsory (here teacher will only assist).
 - IV. Examination will be conducted at the end of the course period.

Department of Geography

Basic Course on 'Geo Spatial Science'

Programme Schedule

DAYS	TOPICS	DURATION
Theory - RS and GIS		
Day1	Concept of Electromagnetic Radiation: Properties, wavelength regions and their applications, Atmospheric windows, Interaction of EMR with matter, Spectral signatures.	1 hour +1 hour
Day2	Platforms and Sensors	1 hour +1 hour
Day3	Remote Sensing resolutions and light interactions	2 hours
Day4	History of satellites; sensors, Radar, Lidar; features of some important satellites	2hours
Day5	Satellite image (Information Extraction) and classification	1 hour + 1 hour
Day6	Basic knowledge of PHOTOGRAMMETRY & GEODESY	1 hour + 1 hour
Day7	Application of Geo-Informatics	2 hours
Hands on training - RS and GIS		
Day8	Georeferencing (with the help of scanned maps, Shapefile & Base map)	2 hours
Day9	Downloading data and reading (Open street map & DEM)	2 hours
Day10	Digitization of point, line and polygon layers	2 hours
Day11	Digitization, area and length calculation	2 hours
Day12	Managing map layers (attribute query & data attachment)	2 hours
Day13	Identification of various features from Landuse and Landcover Maps	2 hours
Day14	Overlapping Consecutive Aerial Photographs	2 hours
Day15	Identifying various physical and cultural features from common area	2 hours