

The ICFAI University, Dehradun
ICFAI Tech School
Minutes of Meeting of Board of Studies (BoS)

Date: October 20, 2022

The meeting of Board of Studies (BoS) for the **M.Tech Program in GIS and Remote Sensing** was held on October 20, 2022 in Blended Mode. The Following members were present in the meeting:

1. Prof. (Dr.) Ram Karan Singh (Vice Chancellor, IUD) Chairman
2. Dr. Minkashi Kumar External Member (Online)
(Scientist/ Engineer-SG & Academic Head,
Photogrammetry & Remote Sensing
Dept. IIRS, Dehradun)
3. Dr. Chander Kumar Singh External Member (Online)
(Associate Professor Dept. of Natural and Applied Sciences,
TERI University, Vasant Kunj Institutional Area,
New Delhi)
4. Prof. G F Chakravarthi (In-charge, ITS) Member
5. Dr. Sanjeev Kumar (Associate. Prof. CSE and Academic Coordinator) Member
6. Prof. Amit Kumar Bera (IQAC Coordinator and
Asst. Professor, Civil Engg.) Member
7. Dr. Gaurav Bhandari (Associate. Prof. ECE and Mechatronics) Member

The Chairman (Honorable Vice Chancellor, The ICFAI University, Dehradun) welcomed the board members and allowed to internal members to introduced themselves and resume the agenda items for the discussion. He explained that the purpose of this meeting is to develop the program structure and syllabi for **M.Tech in GIS and Remote Sensing**.

Agenda and Resolution:

The BoS members had a detailed discussion on fitting the subjects in respective program wise structures and syllabi of **M.Tech in GIS & Remote Sensing**.

The BoS members suggested following points for the further refinement of **M.Tech in GIS and Remote Sensing** Program Structure (Batch 2023-25) as follows:

1. Dr. Sanjeev Kumar introduces the ICFAI Tech School Faculty Members to the Board of Studies Members.
2. Dr. Minakshi Kumar suggested the following points:
 - The Number of credits in each semester should be reduced to 18 to 20.
 - Course on Research Methodology may be included.
 - Course on Geo Statistics may be included.
3. Dr. Chander Kumar Singh suggested the following points:
 - The Number of credits in each semester should be reduced to 18 to 20.
 - Course on Communication and Technical writing may be included.
 - Course on Research Methodology may be included.
 - Course on Geo Statistics may be included.
 - Course on Fundamental of computer programming may be included.
 - Course on Geo Computation using R programming may be included.
 - Course on Advanced Remote Sensing techniques such as LIDAR, UAV etc may be included.
4. Vice Chancellor Dr. R K Singh suggested that in Semester IV candidates should have both options of doing Dissertation in university or going on IP for working on industry projects. Also introducing of the courses research and publication ethics was suggested.
5. Dr. Sanjeev Kumar informed the BoS Members that as per the UGC Notification No. D.O. No. F.1 - 42/2022 (e.Gov) Dated 17/10/2022, related to the implementation of Cyber Security course at UG and PG level will be implemented in the next semester onwards in all the programs of ICFAI Tech School.

Meeting ended with a vote of thanks to the chair.

Action Summary:

- The program total credit is reduced to 72. Cyber Security, Advanced Technologies in Remote Sensing and Geo-informatics are placed in Semester I, the fundamentals of Statistic will be delivered in Geo-informatics subject. Computer Programming “R Programming” is to be taught with Geo-Computing and placed in Semester II. Water resources related all the subjects are reviewed and will be delivered at semester III under Hydrological Analysis of Watershed, an additional computer programming is also added namely Procedure Oriented Programming and Object Oriented Programming, Research Methodology and Research Publication and Ethics subjects are placed in semester III. Industry Internship program is also kept as an optional in semester IV. This flexibility is provided to students to opt Dissertation or Internship Program.

The above points are considered and the general scheme of the program is revised accordingly

ICFAI Tech School

Program Structure for M.Tech. in GIS and Remote Sensing

SEMESTER I

| Sl. No. | Course Code | Course Title | L | P | C |
|--------------|-------------|---|---|---|-----------|
| 1. | | Geo-Informatics | 3 | 2 | 4 |
| 2. | | Cyber Security | 3 | 0 | 3 |
| 3. | | Advanced Technologies in Remote Sensing | 3 | 0 | 3 |
| 4. | | Photogrammetry | 3 | 0 | 3 |
| 5. | | Recent trends in RS and GIS | 3 | 0 | 3 |
| 6. | | Discipline Elective-I | 3 | 0 | 3 |
| Total | | | | | 19 |

SEMESTER II

| Sl. No. | Course Code | Course Title | L | P | C |
|---------|-------------|---|---|---|---|
| 1. | | Image Interpretation and Analysis | 3 | 2 | 4 |
| 2. | | Digital Cartography and Global Positioning System | 3 | 2 | 4 |
| 3. | | Advanced Image Acquisition and Interpretation | 3 | 0 | 3 |

| | | | | | |
|--------------|--|----------------------------------|---|---|-----------|
| 4. | | Geo-Computing with R Programming | 3 | 0 | 3 |
| 5. | | Discipline Elective -II | 3 | 0 | 3 |
| 6. | | Discipline Elective -III | 3 | 0 | 3 |
| Total | | | | | 20 |

SEMESTER III

| Sl. No. | Course Code | Course Title | L | P | C |
|--------------|-------------|---|---|---|-----------|
| 1. | | Hydrological Analysis of Watershed | 3 | 0 | 3 |
| 2. | | Procedure Oriented Programming and OOPs | 3 | 2 | 4 |
| 3. | | Research Methodology | 3 | 0 | 3 |
| 4. | | Research and Publication Ethics | 3 | 0 | 3 |
| Total | | | | | 13 |

SEMESTER IV

| Sl. No. | Course Code | Course Title | L | T | P | C |
|--------------|-------------|---|---|---|---|-----------|
| 2. | | Dissertation / Full Semester Internship Programme | | | | 20 |
| Total | | | | | | 20 |

The Program structure is subject to change (if required).

Electives I (Semester I)

Agriculture & Soil

- Land use and Soil Resource Management
- Agri-Informatics
- Environmental Soil Science
- Satellite Agro-Meteorology

Electives II (Semester II)

Geosciences & Geo-hazards

- Remote Sensing for earth and Planetary Sciences
- Data Processing and Analysis for Geosciences
- Applied and Tectonic geomorphology
- Engineering Geology and groundwater

Forest ecosystem assessment & management

- Forest Mapping and Monitoring
- Forest Inventory
- Forest Informatics
- Forest Ecosystem Analysis

Urban & Regional Studies


- Fundamentals of Urban and Regional Planning
- Geospatial Technologies in Urban Area Analysis
- Urban Resources, Services and Facilities Analysis
- Advanced Urban and Regional Studies
- Urban Mapping and Planning


Electives III (Semester III)

Marine & Atmospheric Science


- Remote Sensing Applications in the Coastal Processes and Marine Ecology
- Atmosphere and Ocean Dynamics
- Satellite Oceanography
- Satellite Meteorology

Note: L: Lectures per Week, T: Tutorials per Week, P: Practical per Week, C: Credits for Subject


Prof. G F Chakravarthi
(In-Charge, ICFAI Tech School &
Mechanical Dept.)


Dr. Sanjeev Kumar
(Academic Coordinator, Associate
Professor, CSE)


Mr. Amit Kumar Bera
(IQAC & Civil Dept. IUD)


Dr. Gaurav Bhandari
(Associate. Prof ECE,
Mechatronics)

attached.
Dr. Minkashi Kumar
(Scientist/ Engineer-SG &
Academic Head, Photogrammetry
& Remote Sensing Dept. IIRS,
Dehradun)

External

Remarks attached
Dr. Chander Kumar Singh
(Associate Professor Dept. of
Natural and Applied Sciences,
TERI University, Vasant Kunj
Institutional Area, New Delhi)

External


Prof. (Dr.) Ram Karan Singh
Vice Chancellor
(The ICFAI University, Dehradun)

MoM -BoS GIS & RS ICFAI Tech School, IUD

Thu, Oct 27, 2022 at 10:34 PM

Chander Kumar Singh <chanderkumarsingh@gmail.com>

To: Academic ITS <academics.fst@iudehradun.edu.in>

Cc: minakshi@iirs.gov.in, AMIT KUMAR BERA <amit.bera@iudehradun.edu.in>, GAURAV BHANDARI <gaurav.bhandari@iudehradun.edu.in>, "dean.fst ." <dean.fst@iudehradun.edu.in>, "IQAC ." <iqac@iudehradun.edu.in>, IU Dehradun Registrar <registrar@iudehradun.edu.in>, IU Dehradun VC <vc@iudehradun.edu.in>

The attached document seems good to me and hence is approved from my end.

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**Dream requires Effortless Sleep & Aim requires Sleepless Efforts.
Sleep for Dreams and Wake up for Aims.**

— Swami Vivekananda

Thanking you

Chander Kumar Singh

Associate Professor

Dept. of Energy and Environment

TERI School of Advanced Studies

New Delhi, India-110070

Member, Royal Society of Chemistry

Member, Indian Society of Remote Sensing

