**Teaching and Examination Scheme**

**To commence from the Academic year: 2023-2024**

**Centre: Centre for Climate Change and Water Research Year: I**

**Program: M.Tech. Geoinformatics Semester-I**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type** | **Level** | **Sem.** | **S. No.** | **Course Code** | **Course Name** | **Credits** | **Contact Hrs/Wk.** | | | **Exam Hrs.** | **Weightage (in%)** | |
| **L** | **T** | **P** | **CIE** | **ESE** |
| **A** | | | | | **(Ability Enhancement Compulsory Courses)** |  |  |  |  |  |  |  |
| AECC | 9 | 1 | 1 | PC 501 | Proficiency and Co-Curricular Activity-I | 2 |  |  |  |  | 100 |  |
| AECC | 9 | 1 | 2 | EM 501 | Group Discussion, Aptitude & Reasoning-III | 1 |  | 2 |  | 3 | 100 | -- |
| **B** | | | | | **(Discipline Centric Core)** |  | | | | | | |
| DCC | 9 | 1 | 1 | CWR 501 | Principles of Remote Sensing & Photogrammetry | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DCC | 9 | 1 | 2 | CWR 503 | Geographic Information System | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DCC | 9 | 1 | 3 | CWR 507 | Geoscience and Advanced Remote Sensing | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DCC | 9 | 1 | 4 | CWR 551 | Principles of Remote Sensing & Photogrammetry Lab | 1 | 0 | 0 | 2 | 3 | 60 | 40 |
| DCC | 9 | 1 | 5 | CWR 553 | Geographic Information System Lab | 1 | 0 | 0 | 2 | 3 | 60 | 40 |
| DCC | 9 | 1 | 6 | CWR 557 | Geoscience, Image interpretation & Advanced Remote Sensing Lab | 1 | 0 | 0 | 2 | 3 | 60 | 40 |
| DCC | 9 | 1 | 7 | UC 251 | Field Visit-3 | 2 |  |  | 2 | 3 | 100 |  |
| **C** | | | | | **Discipline Specific Elective (Any One)** |  | | | | | | |
| DSE | 9 | 1 | 1 | CWR 515 | Basics of Mathematics | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DSE | 9 | 1 | 2 | CWR 505 | Cartography & Global Positioning System | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DSE | 9 | 1 | 3 | CWR 521 | Geoinformatics in Satellite meteorology, agriculture, soil & land evaluation | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| **D** | | | | | **Generic Elective Courses** |  | | | | | | |
| GEC | 9 | 1 | 1 | CWR 509 | Computer programming & Web GIS. | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| GEC | 9 | 1 | 2 | CWR 517 | Neural Networks and Fuzzy Logic | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| GEC | 9 | 1 | 3 | CWR 519 | Artificial Intelligence | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| **E** | | | | | **Skill Enhancement Courses (Any One)** |  |  |  |  |  |  |  |
| SEC | 9 | 1 | 1 | CWR MOC3 | CBCS/MOOC (through SWAYAM/NPTEL etc) Under Credit Transfer Scheme | 3 | 3 |  |  | 3 | 40 | 60 |
|  |  |  |  |  | **Total** | **23** | **15** | **2** | **8** |  |  |  |
|  |  |  |  |  | **Grand Total** | **23** |  |  |  |  |  |  |

\*Select anyone from section D and E. Additional choice of the subject should not match with the existing course subjects.

L - Lecture CIE – Continuous Internal Evaluation

T – Tutorial ESE – End Semester Examination

P – Practical

**Signature of Concerned Teacher Signature of Convener-BoS**\_\_\_\_\_\_\_\_\_\_\_\_\_

**Signature of Member Secretary**

**Teaching and Examination Scheme**

**To commence from the Academic year: 2023-2024**

**Centre: Centre for Climate Change and Water Research Year: I**

**Program: M.Tech. Geoinformatics Semester-I**I

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type** | **Level** | **Sem.** | **S. No.** | **Course Code** | **Course Name** | **Credits** | **Contact Hrs/Wk.** | | | **Exam Hrs.** | **Weightage (in%)** | |
| **L** | **T** | **P** | **CIE** | **ESE** |
| **A** | | | | | **(Ability Enhancement Compulsory Courses)** |  |  |  |  |  |  |  |
| AECC | 9 | 2 | 1 | EM 502 | Group Discussion, Aptitude & Reasoning-IV | 1 |  | 2 |  | 3 | 100 | -- |
| AECC | 9 | 2 | 2 | PC 502 | Proficiency and Co-Curriculum Activities-II | 2 | 0 | 0 | 0 | - | 100 |  |
| **B** | | | | | **(Discipline Centric Core)** |  | | | | | | |
| DCC | 9 | 2 | 1 | CWR 502 | Geoinformatics in Ecology & Forestry | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DCC | 9 | 2 | 2 | CWR 504 | Statistics for Geoinformatics | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DCC | 9 | 2 | 3 | CWR 506 | Digital Image Processing | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DCC | 9 | 2 | 4 | CWR 510 | Geoinformatics in Disaster Management | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DCC | 9 | 2 | 5 | CWR 552 | Geoinformatics in Ecology & Forestry Lab | 1 | 0 | 0 | 2 | 2 | 60 | 40 |
| DCC | 9 | 2 | 6 | CWR 556 | Digital Image Processing Lab | 1 | 0 | 0 | 2 | 2 | 60 | 40 |
| DCC | 9 | 2 | 7 | CWR 558 | Geoinformatics in Disaster Management Lab | 1 | 0 | 0 | 2 | 2 | 60 | 40 |
| **C** | | | | | **Discipline Specific Elective (Any One)** |  | | | | | | |
| DSE | 9 | 2 | 1 | CWR 514 | Geoinformatics in Urban and Regional Planning | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DSE | 9 | 2 | 2 | CWR 508 | Spatial Modeling & Analysis | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DSE | 9 | 2 | 3 | CWR 554 | Spatial Modeling & Analysis Lab | 1 | 0 | 0 | 2 | 2 | 60 | 40 |
| DSE | 9 | 2 | 4 | CWR 560 | Geoinformatics in Urban and Regional Planning lab | 1 | 0 | 0 | 2 | 2 | 60 | 40 |
| DSE | 9 | 2 | 5 | CWR 516 | Geoinformatics in Hydrology & Water Resources | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DSE | 9 | 2 | 6 | CWR 562 | Geoinformatics in Hydrology & Water Resources lab | 1 | 0 | 0 | 2 | 2 | 60 | 40 |
| DSE | 9 | 2 | 7 | CWR 518 | Geoinformatics in Desert | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| DSE | 9 | 2 | 8 | CWR 564 | Geoinformatics in Desert Lab | 1 | 0 | 0 | 2 | 2 | 60 | 40 |
| **D** | | | | **Generic Elective Courses** | |  | | | | | | |
| GEC | 9 | 2 | 1 | CWR 520 | Geoinformatics in Earthquakes | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| GEC | 9 | 2 | 2 | CWR 522 | Geoinformatics in Mineral Exploration | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| GEC | 9 | 2 | 3 | CWR 524 | Geoinformatics in Environmental Monitoring | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| GEC | 9 | 2 | 4 | CWR 566 | Geoinformatics in Environmental Monitoring Lab | 1 | 0 | 0 | 2 | 3 | 60 | 40 |
| GEC | 9 | 2 | 5 | CWR 526 | Surveying and Mapping Techniques | 3 | 3 | 0 | 0 | 3 | 40 | 60 |
| **E** | | | | **Skill Enhancement Courses (Any One)** | |  | | | | | | |
| SEC | 9 | 1 | 1 | CWR MOC3 | CBCS/MOOC (through SWAYAM/NPTEL etc) Under Credit Transfer Scheme | 3 | 3 |  |  | 3 | 40 | 60 |
|  |  |  |  |  | **Grand total** | **22** | **15** | **2** | **10** |  |  |  |

\*Select anyone from section C, D and E. Additional choice of the subject should not match with the existing course subject.

L - Lecture CIE – Continuous Internal Evaluation

T – Tutorial ESE – End Semester Examination

P – Practical

**Signature of Concerned Teacher Signature of Convener-BoS**\_\_\_\_\_\_\_\_\_\_\_\_\_

**Signature of Member Secretary**

**Teaching and Examination Scheme**

**To commence from the Academic year: 2023-2024**

**Centre: Centre for Climate Change and Water Research Year: II**

**Program: M.Tech. Geoinformatics Semester-III**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type** | **Level** | **Sem.** | **S. No.** | **Course Code** | **Course Name** | **Credits** | **Contact Hrs/Wk.** | | | **Exam Hrs.** | **Weightage (in%)** | |
| **L** | **T** | **P** | **CIE** | **ESE** |
| **A** | | | | | **Ability Enhancement**  **Compulsory Courses** |  | | | | | | |
| AECC | 9 | 3 | 1 | PC 601 | Proficiency and Co- Curriculum Activity -III | 2 | 0 | 0 | 0 | - | 100 |  |
| **B** | | | | | **Discipline Centric Core** |  | | | | | | |
| DCC | 9 |  | 1 | CWR 523 | Research Methodology & Project Formulation | 4 | 4 | 0 | 0 | 3 | 40 | 60 |
| DPR | 9 |  | 2 | CWR 525 | Dissertation/Project Work - 1 | 12 | 0 | 0 | 3 | 3 | 40 | 60 |
| **C** | | | | | **Skill Enhancement Courses** |  | | | | | | |
| DSE | 9 | 1 | 1 | CWR MOC3 | CBCS/MOOC (through SWAYAM/NPTEL etc) Under Credit Transfer Scheme | 3 | 3 |  |  | 3 | 40 | 60 |
|  |  |  |  |  | Total | 21 |  |  |  |  |  |  |
|  |  |  |  |  | **Grand total** | **21** | **7** | **3** | **3** |  |  |  |

L - Lecture CIE – Continuous Internal Evaluation

T – Tutorial ESE – End Semester Examination

P – Practical

**Signature of Concerned Teacher Signature of Convener-BoS\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Signature of Member Secretary**

**Teaching and Examination Scheme**

**To commence from the Academic year: 2022-2023**

**Centre: Centre for Climate Change and Water Research Year: II**

**Program: MTech. Geoinformatics Semester-IV**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type** | **Level** | **Sem.** | S. No. | Course Code | Course Name | Credits | Contact Hrs/Wk. | | | Exam Hrs. | Weightage (in%) | |
| L | T | P | CIE | ESE |
| DPR | 9 | 4 | 1. | CWR 528 | Dissertation/Project Work - 2 | 21 | 0 | 0 | 4 | 3 | 60 | 40 |
|  |  |  |  |  | Total | 21 | 0 | 0 | 4 |  |  |  |
|  |  |  |  |  | **Grand total** | **21** |  |  |  |  |  |  |

L - Lecture CIE – Continuous Internal Evaluation

T – Tutorial ESE – End Semester Examination

P – Practical

**Signature of Concerned Teacher Signature of Convener-BoS**\_\_\_\_\_\_\_\_\_\_\_\_\_

**Signature of Member Secretary**