

## Syllabus 2022-2023

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| Teacher (name and affiliation) | Micol Rossini and Biagio Di Mauro (UNIMIB, dep. Earth and Environmental Sciences)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Title                          | Earth Observation data for environmental monitoring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Language                       | <i>English</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CFU                            | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Hours                          | 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Program                        | <p>The aim of the course is to provide expertise in Earth Observation (EO) and monitoring. The course will be structured as follows:</p> <p>Lecture I: Basic concepts of optical remote sensing: physical principles, digital images</p> <p>Lecture II: Availability of Earth Observation data (in particular ESA-Sentinel): presentation of different satellite missions and their the potential applications</p> <p>Lecture III &amp; IV &amp; hands-on exercises: two Earth Observation applications according to PhD needs and requests (e.g. hydrological and cryospheric applications; land surface and ecological applications) followed by corresponding hands-on exercises.</p> <p>Suggested years of attendance: I and II</p> <p>Expected outcome: introduction of EO data-based approaches in the students own PhD projects</p> |
| Evaluation: YES/NO             | YES with a final oral presentation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Calendar                       | <i>II semester</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |